e Minima Donna

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroat.

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LONDON, SATURDAY, APRIL 14, 1877.

SUPPLEMENT. PER ANNUM, BY POST, 21 40.

JAMES H. CROFTS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER, No. 1, FINCH LANE, CORNHILL, LONDON, E.C.

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, Issurance, Assurance, Teiegraph, Shipping, Canal, Gas, Water, and hares.

Rescondated in Stocks and Shares not having a general market value.

RESS IN COLLERY and IRON Shares, and in the principal WAGON and ACTURING COMPANIES of the NORTH OF ENGLAND AND SOUTH OF THE PRINCIPAL OUT OF STRINING SHARES.

NESS in all the principal COTTON SPINNING SHARES.

J. H. CROTTS, having now established CORRESPONDING AGENCIES in all the Towns of the United Kingdom, is prepared to deal in the various LOCAL and Shares at close market prices.

Accounts opened for the Fortnightly Settlement.

Monthly and Daily Price Lists issued.

Bankers: City Bank, London; South Cornwall Bank, St. Austell.

match Dealings wheton, £2, gentine, £14, serdamant, 13s, amplyide, 9s, 3d, sidord United thedral, £1, hieago, £4%, spe Copper, amentina, £41, hontales, 7s, went, £3%, cresby, £21, ... Shares solutions of the state of the state

OREIGN BONDS — ARGENTINE — EGYPTIAN—RUSSIAN, SPANISH, TURKISH, SPECIAL BUSINESS, and latest information. ightly accounts opened on receipt of the usual cover.

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* Business Transacted in all Miscellaneous Bhares (of whatever description) having London or Country Market Values. JAMES H. CROFTS, 1, FINCH LANE, LONDON.

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reholders, intending investors, and others who may be desirous of obtaining mation and advice as to operations at the present time are requested to com-

E COLUMN TO THE REAL PROPERTY OF THE PERSON OF THE PERSON

8 Chicago, £4 13s. 9d.
10 Don Fedro, 10s. 6d.
20 Last Chance, 1ss.
20 Last Chance, 1ss.
20 Last Chance, 1ss.
26 Ton Consols, £2 3s. 9d.
40 Devent.
40 East Caradon, 16s. 6d.
50 East Caradon, 16s. 6d.
50 East Caradon, 16s. 6d.
50 Exchequer, 39s. 6d.
50 New Quebrada, £4 15s.
50 Wirely £4 15s.
50 Wirely

100 Parys Mount., 9s. 6d.
40 Pennerley, 12s.
25 Pateley Bridge, £2½.
50 Penstruthal, 11s. 6d.
30 Richmond, £5 16s. 3d.
15 Roman Graw., £12½.
60 Rookhope, 78s. 9d.
10 Tankerville, £8 13s. 9d.
15 Van. £53½ (ex div.)

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5 Wye Valley.
20 West Mostyn, 12 per
cent. preference.)
5 West Wye Valley.
10 West Goginan. SELLER OF-R OF—
ant. 20 Flagstoff. 5 Wye Va
le. 15 Grogwinion. 20 West M
50 Hingston. 20 West M
tin. 5 Llanrwat. 5 West W
Prices of the above on application.

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Almada	68	8s.	Marke Valley	14s	16s.
Assheton	£ 15% £	17/8	North Laxey	149	164.
Bodidris	1	11/4	New Quebrada	£ 414	₽ 436
Chapel House	3	314	New Zealand Kapanga.	21/	216
Derwent	23/4	31/4	Parys Mountain	89.	100
Devon Great Consols	314	4	Pennerley	109	120 64
Dolcoath		36	Penstruthal	104	110
Don Pedro	88	98.	Richmond	K 4/	57/8
Eberhardt		81/4	Roman Gravels	191/	13
East Caradon	\$8	3/4	Rookhope	10-13	00-
East Van		61/2	Santa Barbara		
		2 2	Santa Darbara		
Exchequer Gold			San Pedro	10s	
Flagstaff		25/8	South Condurrow	71/2	
Frontino	134	1 7/8	Tankerville	8	
Glenroy	1	11/2	Tineroft	17	19
Glyn	1 36	2	Van	35	37
Great Laxey	201/2	211/2	Van Consols	2	21/4
Javali	69	78.	West Assheton	3/4	1
Last Chance	10s1	2s. 6d.	West Chiverton	16	18
Ladywell		11/4	West Tankerville	114	134
Leadhills	614	634	Wh. Grenville		
Lisburne	60	70		-/6	-/-

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East Van, £6½.
Grogwinion, £4½.
Great Laxey, £2½.
Glenroy, 25s. 6d.
Almada, 7s. 6d. Almada, 7s. 6d. Almada, 7s. 6d. Argentine, £45/. Cedar Creek, 12s. Colorado, £1 13s. 9d. Chontales, 5s. 9d. Don Pedro, 9s. 6d.

Parys Mountain, 8s. 3d. Wh
Eberhardt, £8 6s. 3d. Las
Exchequer, 88s. 9d. N.;
Emma, 7s.
Flagstaff, 47s. 6d. Por
9d. Frontino, 37s. 6d. Rici
I. X. I., 20s. 6d. 8ou
I. X. Layani, 8s. 6d. Tec
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Berlord United.
Combmartin, 8s.
Derwent, 22%.
Devon Consols, 23 18s 6

East Van, 26%.
Growinion, 24%.
Great Laxey, 22145.
Great Laxey, West Tankerville, 28s 9d.
W. Tanker, (pref), £23½
W. Wye Valley, £2½.
Wheaf Grenville, 24s 3d.
Last Chance, 12s.
N. Zealand Kap., £2½.
Pestarena, 4s. 6d.
Port Phillip, 11s. 6d.
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M. R. THOMAS THOMPSON, JUN., 1, PALMERSTON BUILDINGS, BISHOPSGATE STREET, LONDON, E.C.
Mr. TROMPSON strongly recommends the purchase of the shares of the CHAPEL HOUSE COLLERY COMPANY (Limited) for investment. This company, otwithstanding the stagnation in trade, clears a profit of 2s. per ton on its coal, and when the new works are completed he present handsome returns will be much augmented.

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OTICE.—We regret to find that some of our clients have been induced to PURCHASE LLANRWST SHARES, advertised in this Journal at low prices about two months since, and up to the present time have been unable to obtain the delivery of the same. Purchasers of these shares when offered at low prices will do well to see that the transfer is certified by the Secretary of the company, or the certificate attached before they part with their money.

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THE TURNEI. AND PORT GORE PROPERTIES.

Three quartz reefs are kn.wn to exist on these properties. On one of them exploratory workings have been made to a limited extent, principally on the furner property, which have resulted in showing that this reef contains gold in sunsiderable quantity. The available length on the reefs is 1200 ft, in the Turner property and 1600 ft. in the Port Gore property, or together a continuous length of 500 ft. The properties are held on mining leases direct from the Crown for 18 rears from 1st July, 1872, at the annual rent of 247 is, 3d.

The reef already partially explored was first opened by a series of pits from the urface, and its continuity through both properties and direction and auriferous inaracter determined. The existence of gold in paying quantity at the surface acting been proved, an addit level or tunnel was put into the side of the hill at a lepth of 250 it. from the highest outcrop of the reef, which was intersected and liveven on for a distance of 169 ft., and there proved to contain gold in paying quantity. Above this level four others have been driven, from all of which to the surface and the positions and to the depths shown by plan No. 4 accompanying the prospectus. From No. 2 level a winze has been sunk to meet the next lower level, and a crushing of 18 tons of stone taken from this winze produced 2 ozs. of gold to the ton of stone. The stone between the two levels in the block of ground in which the winze is partly sunk has not been extracted, as No. 4 level has not yet one driven for enough to reach it.

By means of the adit or tunnel the drainings of all the workings of the mine is a ffected in a simple manner, the whole of the water discharging itself at one being the first of the paying machinery is needed for that purpose. The mine can itso be worked to a further depth of 250 ft. (down to the level of the sea) by means of a deep addit, with the same important advantage in regard to drainage, without pumping machinery.

ping machinery.

In ways have been laid in the main drives, ladders fixed in the shafts, and tetring hoppers to deliver the stone to the underground wagons. The stone is delivered to the crushing machinery by means o. shoots, hand labour for the cose being, therefore, unnecessary, the rects outsits generally of compact quartz. The prevailing country rock is reter by Dr. Hector, the New Zealand Government Geologist, to consist of secons and chlorite schist.

The course of carrying out the work already done 1560 tons were raised and hed, with the following results, viz.:—

of Tons Retorted gold Yield per ton ling, crushed, but ined.

Other courses the course of carrying out the work already done 1560 tons were raised and bed, with the following results, viz.:—

of Tons Retorted gold Yield per ton ling, crushed, but ined.

Oz. dwt. gr. (2. dwt. gr. (2. dwt. gr.

					CIWE.						
1		22		24	13	21		1	2	11	 Turner property.
2		30		21	0	0		0	14	0	 ditto
3		130		7.5	0	0		0	11	13	 ditto
4		160		59	9	5		0	12	1	 ditto
						0	*****	0	10	21	 ditto
6		250		147	18			0	11	20	 ditto
-		150	*** **	86	2	12		0	11	11	 ditto
8	******	220		137	6	0		0	12	11	 ditto
9		150		73	13	0		0	9	1	 ditto
10	******	200	*****	25	0	0		0	2	12	 Port Gore property.
2.1		1.0		1.72	-	0		-	-	-	w b. charl.

o 200 25 0 0 0 2 12 ... Port Gore property.

1 18 56 7 0 2 0 9 ... Turner property (from winze).

2 20 17 6 8 0 17 7 ... ditto from No. 4 level,

he average yield of the whole of these crushings is 11 dwts. of gold to the ton
tone, or if the single crushing (No. 19) of stone from the Port Gore property
scaladed (that property, although proved to be auriferous, having been accel mainly on account of its affording a better point from which to drive the
sel into the Turner property, the average return yielded by the crushings of
the from the Turner property will be seen to exceed 12 dwts. per ton of stone.
If the view of ascertaining whether the gold had been fully extracted from
stone that had been crushed, samples of the tailings from these crushings have
a ussayed here by Frederic Claudet, Eq., F.C.S., who has ceftified that they
ain at the rate of 8 dvts. of gold to the ton. A considerable portion of this
of gold in tailings will probably be saved in future by perfecting the extractprocess, in which cose the average return may be expected to reach the highly
unerative rate of 1' dwts. per ton of stone.

which cose the average return may be expected to reach the nignry to of 17 dwts, per ton of stone.

y and appliances on the properties are as follows, viz.:—
power steam engine, with large multitubular boiler complete,

ng and driving bands and drums for pump and berdan pan. One
for supplying water to the battery. Two batteries, each of five
each heat weighing 759 lbs., revolving, with copper and blanket
kee, complete. One berdan pan for amalgamation, 4ft. in diali and drag. Retort. Powerful double winch and derrick on
oy and moorings for vessels discharging coal, &c. Boat and boatgallon water-tanks. Trucks, engineers', carpenters' and mining
feksilver, paints, nails, and other stores. Manager's office and
magazine.

or the property of the water on a wharf already stores of all kinds can, therefore, be delivered from the vessels to at once placed in the engine house or store. The cashi water store was the cashi water from the adjacent towns of Picton steamers that ply regularly, the distance from Picton being res, however, can land at a point about 23 miles from Picton picton, the properties by a walk of about a mile. Machinery and stores are seven hours from Picton to the battery site.

present can be readily obtained. There is good drinking water it accommodation for about 20 men.

your at present can be readily obtained. There is good drinking water and hut accommodation for about 20 men. On of the works at the mine is such that they can be resumed and o active operation immediately apon receipt of instructions to that representative of the company in the colony, every appliance being

pose.

If machineey and materials, and in carrying on the exploratory 210,546 Hs. 16d. was expended, including £3129 5s 10d., the gold taised. The parties who now offer the mine for sale not be necessary means for adequately developing it, desire to part y in order that additional capital may be introduced to continue

nunerative operties, buildings, machinery, and appliances have been ed on behalf of this company for the sum of £1600 in each 4-up shares of the company. No royalty is reserved by the coperties subject to any

where, nor are the properties subject to any, the leading features of the proposed undertaking in regard to these properties New Zealand may be shortly recapitulated as follows, viz.:—

"The properties its together, are easily accessible, and held at moderate rentals.—The paying character of the recfs has been proved by a series of crushings charge quantity of stone. The uncertainty, therefore, attendant upon a a result make it from a mere assay of samples is thus entirely eliminated.

"Much work has been done in opening out the mine, and the portion of the is standing between levels 2 and 4, from which 2 ozs. of gold to 1 ton of stone we been obtained, is more or less ready for extraction.

n obtained, is more or less ready for extraction.

pumping machinery is required in order to keep the mine drained to the about 500 it. from the highest point of the reef.

quartz cru-hing and other machinery is in excellent working order, and the preparations can be resumed immediately.

o other reefs besides the one that has been partially explored are known in the properties.

roperties,
restate the greater part of the purchase-money in shares, thus
itically their confidence in the paying character of the mine,
alans and papers and letters from Mr. Charles Henry Turner, who
ears held and resided on the Sheep-run, upon which the reefs are has for many years held and resided on the Sheep run, upon which the reefs a ituated, and who was the discoverer of them, together with a report upon those rules by Dr. Hector, the New Zealand Government Geologist, may be set the Company's Offices.

npiny's Offices. elating to these properties accompany this Prospectus, and are numbered

THE DURYEA COPPER PROPERTY.

This property is situate on Yorke Peninsula, in South Australia, at a of four miles and a half by railway from Port Wallaroo, where there are

The quartz reefs are kn: wn to exist on these properties. On one of the company to wriking have been made to a limited extent, principally on the property and the Port Gore property. The quartz reefs are kn: wn to exist on these properties of the company to desire the properties of the company to give the properties of the company to give the properties of the company to give the properties of good promise and intrinsic value, which are obtainable on easy terms, to acquire and develope.

The quartz reefs are kn: wn to exist on these properties. On one of them company to develope.

The quartz reefs are kn: wn to exist on these properties. On one of the company to develope.

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The properties of the company to develope the properties of the company to develope.

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The properties of the company to develope the properties of the company to develope.

The properties are held on property, or to gother a continuous length of the properties are held on property, or to gother a continuous length of the properties are held on paying quantity at the surface, and its continuity through both properties and direction and arriferous harvage been proved, an adit level or tunnel was put into the side of the hill at a depth of 250 it. from the highest outcomp of the reef, which was intersected and depth of 250 it. from the highest outcomp of the reef, which was intersected and depth of 250 it. from the highest outcomp of the reef, which was intersected and depth of 250 it. from the highest outcomp of the reef, which was intersected and depth of 250

Burra Mine (a man of long and varied experience), this lode at the mouth of the Duryea shaft, and 2 fms. below the surface, and he agreed with me that it is a fine strong back.

Capt. Tregoweth, late of the Parara Mine, a man of considerable intelligence as a practical miner, and who worked at the Duryea, tells me that there is a lode at the bottom of the engine-shaft (45 fathoms) 12 feet wide, composed of clay-state, with veins of quarts and yellow copper ore.

Taking the foregoing evidence (to which a volume might be added) in connection with the abundance of vein stuff, all saturated with copper, lying about the shafts, I am led to the conclusion that the prospects of making it a good mine are fair and reasonable, were it carried easy 20 or 30 fms. deeper, and the upper drives extended in the line of the lodes.

Taking the depths of the shafts, &c., from Capts. Tregoweth and Powell, supported by the reports contained in the oil report book at the mine. From the letters and reports of the several captains who had charge from time to time of operations at the Duryea before its present owners acquired it, I find that they all speak of the prospects of the mine in the highest terms. From the plan of the 13 fm. level it appears that there are three lodes or branches at that depth. Capt. Powell says that there is a large and strong lode in the Duryea shaft (being the shaft first sink to the depth of 12 fms.), and that it has not been intersected by the cross-cuts driven from the engine-shaft northwards, and the plan seems to confirm that opinion.

It may not be amiss to mention that when the water was drained from section 415, a distance of over 1 mile away, and in a line with the Duryea shaft (being the shaft first sink to the depth of 12 fms.), and that it has not been intersected by the cross-cuts driven from the engine-shaft northwards, and the plan seems to confirm that opinion.

It may not be amiss to mention that when the water was drained from section 415, a distance of over 1 mile away, and in a line with

ode, but on the chloritic dyke that crosses the lode at that point. It goes to show, however, that the lode is continuous up to the dyke, and also that it is both large and porcus.

I have from time to time expressed myself strongly in favour of this property, and I would now refer to the general considerations which carry conviction to my mind of its prospective value.

I. Geographically considered its position is of the very best, being in the line of productive mines, which includes within its east and west boundaries the "Wallaroo," "Devon Consols," and "Kurilla" on the north, and the , 'Doora' on the south, the whole being included within a distance of two miles from north to south. It can hardly be necessary to refer to that well known fact—that the profitable productiveness of mineral veins, parallel to, within reasonable distance of, and included in the metalliferous belt or zone containing one or more rich loides, is usually a mere matter of time and labour. The ore in all cases may not occur at the same depth, and may sometimes lie in a different "marrix," but such veins generally pay in the long run.—2. Geologically I know of nothing to place the Duryea second to any mine in this famous copper mining locality, the same kind of schistose rocks in which the mines above named are situated exist here, and the occurrence of a felspathic dyke in contiguity to the loile, east of the engine-shaft, can hardly be called a detracting, but rather a favouring circumstance.—3. Mineralogically the property can but deeply interest any latelligent copper miner, as at and near the surface a considerable quantity of copper ower found, not only in the lode but in offshoots. Indeed, in its show of surface oper the Duryea at the time of its discovery was considered one of the prizes of this district.

Had the occurred on a mere pipe vein, or in a basin differing in its character

copper miner, as at and near the surface a considerative quantity of copper or was found, not only in the lode but in offshoots. Indeed, in its show of surface ore the Duryea at the time of its discovery was considered one of the prizes of this district.

Had the ore occurred on a mere pipe vein, or in a basin differing in its character and composition, and unconformable to the surrounding strata, it might be inferred that the shallow deposit was detached and isolated. When, however, it is considered that the ore was the outcome of a well defined lode, and independent of the possible conditions above named, such inference would be unfounded, and other causes for its continuance to a greater depth must be looked for, and these are found in the fact that a bed of iron pyrites succeeded the shallow deposit of copper ore, or rather that the copper in a free state gots on ixed up with the pyrites as to reader it of little or no value. It must also be observed that the pyrites as to reader it of little or no value. It must also be observed that the pyrites as to reader it of little or no value. It must also be observed that the pyrites as to reader it of little or no value. It must also be observed that the pyrites as to one immense copper lode.

I infer from the foregoing facts that beneath the pyrites the second deposit of copper will be found by those who may sink through it, and that the prospects of success are fair and reasonable.

I may add that in other hands and under more favourable circumstances it might have continued to work to this day. It was a discovery of the early days of mining on this peninsula, when a mining main raged, and everybody went into it in the foolish expectation of making rapid fortunes. Only a few of those speculators had the means to carry out their objects, or at all understood the early strugge gies attending the undertaking. The capital subscribed was derived from sources that could but ill spare it, and as soon as the excitement had passed away they found themselves involved in u

been very long under water, and probably would have to be replaced by new. To do this and put the shaft in repair I consider that it would cost roughly £1900, which, added to the £900 for boiler, &c., would be £2900. It will cost, therefore, also not much less than £3000 to put the engine and pumps into order, pump out the water, and put the shafts and drivings in fair working order, and take (say) form months to perform the work.

Capt. Robbert RANDERS, the resident manager of the Burra Burra Mines, in referring to the property, in a letter to a correspon fent in London, dated 23rd March, 1576, expresses his opinion thus:—I believe the Duryea would make a good mine it possesses all the features and elements of one, and it should be thoroughly friend that I curefully examined and reported on the Duryea property shortly before operations were suspended. As the result of my inspection of the workings, I formed a very favourable opinion of the Duryea as a mineral property, and of its prospects, if properly and adequately developed; and I strongly recommended that the operations then in progress should be continued; but owing to the want of money my advices was not acted on.

Chittlehampton, Devon, December 18th, 1878.

It has been arranged that the working of the Duryea Mine shall be superintended on very moderate terms by Capt. Thomas Anthony, with whose qualifications as a mining manager that the working of the Duryea Alies down on the directors are fully attained, concurrently with his present employment on the adjoining Kurilla Mine. They have also secured the valuable conditional contract has been entered into for the purchase of the Duryea property and mine for £3000 in cash, £2000 in fully pald-up shares, and a royalty of its property.

The plans relating to this property, which accompany the prospered 5, 6, and 7.

The directors will proceed with operations at the Turne.

The plans relating to this property, which accompany the prospecia, at manbered 5, 6, and 7.

The directors will proceed with operations at the Turner and Post Gore and Duryea Mines as soon as such a number of the shares shall have been shown for as will, in their judgment, be sufficient for dealing adequately with them, is of the company's capital for that purpose.

No promotion money is to be paid, and no expenses will be incurred other that those necessary for the formation and establishment of the company.

Agreements have been entered into as follows:—

(1.) Between Frederick William Turner, as attorney for Charles Henry Turner.

John Henry Dalton, William Evans Dive, Thomas Galloway, William John Henry Dalton, William Evans Dive, Thomas Galloway, William Zealand, of the one part, and Charles Grainger, as agent for and on behalf action company proposed to be established under the title of the Barden Mining Company (Limited), of the other part, dated the 14th day of February, 1877; and (2) between the Yorke Penlisula Mining Company (Limited), of the other part, and on behalf of a certain company more part, and the same season of the company and the part, and Charles Grainger, as agent for and on behalf of a certain company more part, and Charles Grainger, as agent for and on behalf of a certain company more part, and Charles Grainger, as agent for and on behalf of a certain company more part, and Charles Grainger, as agent for and on behalf of a certain company company (Limited), of the other part, dated the 13th day of February, 1877.

The Memorandum and Articles of Association, and conditional contracts, say be seen at the offices of the company's solicitors.

Applications for shares must be made on the form accompany to maker, or the same may be remitted by cheque (crossed Union Bank of London) to the Sensity, and the same may be remitted by cheque (crossed Union Bank of London) to the Sensity, and the deposit of 5s, per share be paid to either of the company's bankers, or the same may be remitted by che

FORM OF APPLICATION FOR SHARES.

(To be left with the company's bankers.)
To the Directors of the Ravenseliff Mining Company (Limited).

To the Directors of the Kavensolif Mining Company (Limited).

Gentlemen,—Having paid to your bankers the sum of 2 being a person of the shares in the Ravenschiff Mining Company (Limited), I request you to allot to me that number of shares, and I hereby agree to accept the sume or any less number you may allot to me, and to pay 3s. per share (left) the lance of 5s. per share) upon allotment; and I authorise you to place my name of the Register of Members for the number of shares that shall be attotical to me.

Address

Occupation.

Date... 1877. Signature

Lectures on Practical Mining in Germanu.

CLAUSTHAL MINING SCHOOL NOTES-No. XX.

BY J. CLARK JEFFERSON, A.R.S.M., WH. SC., Certificated Mining Engineer.

(Formerly Student at the Royal Bergakademie, Clausthal),
[The Author reserves the right of reproduction.] SECTION II. PROSPECTING FOR MINERALS-BORING.

II .- THE CONSIDERATION AND DESCRIPTION OF THE SEPARATE BORING TOOLS.

PROSPECTING FOR MINERALS—BORING.

II.—THE CONSIDERATION AND DESCRIPTION OF THE SEPARM
BORING TOOLS.

It was pretty evident that such an important invention as that of Fabian was not long destined to remain in its incomplete condition without some attempts at improvement. Its great improvement was effected by Herr A. Werner, of Arnshall, near Arnstadt, and the employed at Friedrichshalle, near Coburg, in 1856. The following is the inventor's description:—

The effect of Fabian's apparatus depends on the difference between the moment of inertia of the falling rods plus that of the water, &c. at the bottom of the hole, which would be set in motion by the broad face of the borer, plus the friction of the sides of the bore against the sides of the bore hole, and the friction of the wings upon their seats or ledges. The greater the sum of the first and the samiler the latter the ensier will the instrument be worked. The apparatus works the more easily and exactly when the falling role are light, when there is fresh shime at the bottom of the hole, when the bore hole deviates somewhat out of the perpendicular, and when the friction between the wings and their seats is brought to a minimum by making both of hard well-polished steel. The work is the more difficult when the weight of the shaft rods is small, the bore hole clean and perfectly vertical, or when the friction between the wings and their seats is very great. In this case the bore holes required to the vae considerable diameter, and the upper rods are taked aby heavy, so that even when 1 in. square iron rods are used the work required of the bore master becomes excessively exhanting, and with the use of wooden rods is impossible (hence the superiority of Kind's apparatus over that of Fabian).

Former's free falling apparatus may be said to be Fabian's provided with a pair of wings, inclined at about 700 the work required of the bore master becomes excessively exhanting and with the use of wooden rods in the super rods of an upper piece, to which the shaft rods

and rests at the bottom of the bore hole the upper boring rols are lowered, and the upper wings slide in the long vertical slits, and the lower wings are guided by the guide plates (i.e., wedge pieces) until the upper wing is vertically over its seat. Now, whilst he until the upper wing is vertically over its seat. Now, whilst the motion of the rods is changed, and continues to be an upward motion, the cap rests upon the shoulders of the instrument. Now, when the rods have been raised to their highest position, and again begin the rods have been raised to their nighest position, and agaid eggis to descend, then the pressure of the water beneath the cap retards its motion and that of the side plates and the guide plates, so that the latter strike against the lower wings and twist them round to the right, when the upper wings are thrown off their seats into the long vertical slits, and the lower rods and borer having no support fall to the bottom. The condition to be fulfilled in order that the apparatus may work is that the play of the cap upon the rod is somewhat smaller than the difference between the fall of the borer and the lift of the rods. The amount of play should not be more than 11 in. to 2 in.

The cost of one of Werner's instruments, weighing about 240 lbs.,

* Being Notes on a Course of Lectures on Mining, delivered by Herr Bergrath Pr. Von Grondbeck, Director of the Royal Bergakademie, Clausthal, The Hark Dr. Von GRODDE North Germany.

APRIL vas 19%; thi

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cap p

783 101; this instrument possesses the disadvantages occasioned by was 10%; this instrument possesses the disadvantages occasioned by the use of a cap, is heavier, but not so complicated as Kind's. In the theuse of a cap, is heavier, but not so complicated as Kind's. In the being trials at Friedrichshalle, in consequence of a scarcity of water power, it was found that to an effectual working of the cap at least aduble velocity would be required, or rather that the commences aduble velocity would be required, or rather that the commences aduble velocity would be required, or rather that the commences aduble velocity would be must be made more suddenly. At ment of the downward stroke must be made more suddenly. At least of the surface a quick downward motion by means to the well bear mechanical device used for obtaining a quick return motion known machines, &c. nown mechanical defice used for obtaining a quick return motion a shading machines, &c. Perhaps the greatest objection to Fabian's instrument is that if the

Perhaps the greatest objected to Francis instrument is that if the ings of the lower rods are resting on their seats whilst the rods are ing raised to the surface, a shock might throw them off, and the ing raise of this great striking against the lower seat.

Perhals the lower rods are resting on their seats whilst the rods are wings of the lower rods are shock might throw them off, and the being raised to the surface, a shock might throw them off, and the being raised to the surface, a shock might throw them off, and the being lower ols, falling and striking against the lower end or ring, may lower rods, falling any paratus; and even supposing the wings fracture the free falling apparatus; and even supposing the wings are to be resting on the lower ring of the shears, when the rods are to be resting against any projection of the side of the bore-hole, bore catching against any projection of the side of the bore-hole, bore catching against any projection of the side of the apparatus said being momentarily stopped, whilst the rest of the apparatus governments to be lowered, so that when the upper rods, coming down, continues to be lowered, so that when the upper rods, coming down, continues to large and borer past the obstruction, they fall freely until the wings strike against the lower rung. It is sufficiently a sufficient to the sufficient the above risks; this consists of enlarging the slit at the obstruction and the sufficient to the sufficient to a sufficient to a sufficient to a sufficient to the sufficient to a length of rods are twisted so the sufficient to the vertical slit, so that the wings are prevented from largement of the vertical slit, so that the wings are prevented from largement of the vertical slit, so that the wings are prevented from largement of the vertical slit, so that the wings are prevented from largement of the vertical slit, so that the wings are prevented from largement of the vertical slit, so that the wings are prevented from largement of the vertical slit, so that the same private the bore hole, this can be readily effected with Fabian's apparatus with Klecka's improvement, which makes it a most suitable astr

this been carried down a depth of 220 k. In about 11 weeks.

off's Free Falling Apparatus.—This apparatus has the same pringle for its foundation as Fabian's. The shears, which form as usual apper part of the apparatus, contain two slits, in which the two ill nose pieces of the falling rod slide. Now, when the rods are detected to their highest position the nose pieces rest upon their seats, he shock of the boring lever against a spring board the nose are thrown off, and a simultaneous short quick twist to the decision of the upon of the up are thrown on, and a simulations and the twist to the is impurted to the apparatus. A gentle turning of the upper to the left on their descent brings the seats in the shears beneath sea pieces of the lower rods. It remains now to show how the gives is detached from the shears; for this purpose the slittraged at a short distance from the bottom, and there is a diaat 45° to the longer slit) groove in the elliptical end of Now, when the nose pieces are brought down as far as ment of the slit, the falling piece can be turned round, when the nose pieces come into the diagonal slit, and 45°, when the nose pieces come into the diagonal slit, and g piece can then be drawn out by raising the shears. It mentioned that the fall of the nose pieces during the usual of the instrument does not reach down so far as the enlargeto the slit. Whilst the rods are being raised or lowered the er, or rather nose pieces of the borer, rest at the bottom of the grentical greove. The advantage that in case the borer becomes the bottom of the bore-hole, it can be completely n the upper rods, is more than counterbalanced by the ing the raising and lowering of the rods into the bore lorer becoming loose and falling to the bottom by an

ist of the upper rods. Epinay, exhibited a free falling apparatus at the Paris 1855. The upper and lower rods are inserted through ends of a tube, which here takes the place of a pair of shears; op of the lower rod ends in a cross, the end of the upper rods Schaped fork. When the latter is lowered sufficiently, and tell slightly round, it catches beneath the cross, and both can be sed together. When the boring lever strikes the spring supper rods are suddenly twisted the opposite way, and rous being thus thrown off are free to fall.

the lower rolls being thus thrown off are free to fall.

The best free falling instrument yet invented for use with rigid rolls is that of the boring inspector Zobel, of Elmen, near Schönebeck, which was patented by him in 1859. The instrument consists of four principal parts—the upper piece, which is attached to the upper shaft role, and to which the two side plates are attached by means of four double cotters; these two side plates have each a long vertical sit. These surround the falling apparatus proper. The bottom of the two side plates are fastened together by cotters, but not in such a moner as to wedge tight the falling piece, which latter has a slit 21.6 in, long, through which these cotters pass, so that the falling apparatus caunot be detached without first loosening the cotters, which also serve as a guide to the falling piece in its descent. At the also serve as a guide to the falling piece in its descent. At upper end of the falling piece is the iron strap, which is cottered to the means of two sets of double cotters, and holds in a steel piece the two wings, likewise of steel, and the lower bed, which son a small piece of indiarubber. Below the iron bride or p the falling piece is enlarged to a short distance, and receives his enlargement two short dovetailed cross pieces, these slide the side of the side plates, and thus serve as a guide to the top. of the side plates, and thus serve as a guide to the top piece. The wing piece is readily moveable about ounded off at both ends, but is not too loose, the pressure on the two bearing beds, since the latter upon a pad of indiarubber, can be adjusted by means of the rel bridle. The wing piece is moved about its axis by means e sider. This slider is attached to, and moved by, a bell-shaped the motion of the latter being limited by a stop.

e action of the instrument is as follows: When the free falling

cap, the motion of the latter being limited by a stop.

The action of the instrument is as follows: When the free falling piese and horer have fallen to the bottom of the bore hole, the shears gadually follow, and the wings approach the upper portion of the long slit. As the slider is prevented by a stop from moving higher, and the rods still continue to descend an inch or two further, the wing piece is caused to turn slightly. For this purpose the top and bottom edges of the wings are bevilled off. When the rods commence to rise the pressure of the water on the top of the cap pushes it downwards against the stop, and the wings drop down and rest upon the ledge. The position of the slider prevents the wings slipping off the ledge. By these means the lower rods are also raised; when they have attained their highest position and commence to they have attained their highest position and commence to ad the water presses beneath the cap and raises the slider, at the same time turns the wings slightly round back into eirold position. The wings, and consequently the lower rods, wing no support, now fall to the bottom of the bore hole, until a shears follow, and again catch and raise them up. This borer is the dia-dvantage that it can only be used in wet bore holes. Romanovsky's Free Falling Apparatus.—This instrument—the indian of a Russian mining engineer—depends upon the same principle as Fabian's, but does not require any effort of the bore master set free the falling rods. This is effected by means of a wedge

ie falling rods. This is effected by means of a wedge ed to a cap piece. The top of the free falling piece is some-enlarged, and rounded at the end. A short cross piece, which telightly ontwards at the bottom, is fixed to the two sides of the shars. On the opposite side of the shears to the cross piece a lever is hingel, the inner side of which is so shaped that when it is pressed inwards it holds the top of the free falling rod between it and the cross piece, the enlargement at the end of the rod preventing it slipping down, so long as the lever is pressed inwards, but immediately the hinged lever is freed from pressure it gives way to the weight of the rods, allowing them to fall freely. This hinged lever is pressel inwards by the wedge attached to the cap. The back of the wedge presses against two short cross pieces between the sides of the shears, whilst the inner side of the wedge presses the hinged lever. The action of the instrument then is as follows: binged lever. The action of the instrument then is as follows:-When the lower rods are resting at the bottom of the bore hole the top enlarged end of the free falling rod, when the upper rods have reached h. i. . reached their lowest position, is just above the cross piece. Now, when the upper rods begin to ascend the water on the top of the cap piece forces it and the wedge downwards, which prevents the high praise awarded to them.

hinged lever opening, and thus holds the lower rods fast. When the downward motion, however, is commenced the pressure of the water beneath the cap raises it, and along with it the wedge, which releases the hinged lever, the lower rods ralling freely to the bottom. The instrument requires to be gradually rotated by the bore master. The inventor considers it possible to use this apparatus with a rope instead of rods, the shock of the falling wedge causing such an oscillation of the instrument that it would lay hold of the free falling rod in a fresh position every time, causing the borer to cut the ground in a fresh position at every blow. We are not, however, acquainted with any performance of the machine in practice, and its use with a rope appears doubtful.

In the borings for brown coal at Schöningen Herr Greifenhagen

has dispensed with the tong-gripping arrangements in Kind's instru-ment, and has substituted a simpler one, which we will now describe. The cap is not, as previously, placed at right angles to the axis of the bore hole, or rather the lever to which it is attached, but inthe bore hole, or rather the lever to which it is attached, but inclined at 45° to the same, and is made (in two parts) oval in shape. The leathern discs are entirely dispensed with, the whole being made of sheet-iron. The cap completely surrounds the sides of the shears, having slits in it for the purpose. The cap is attached to the top end of a lever, which can rock to a certain extent on a pin asa centre. The lower end of the lever is shaped somewhat in the form of a blunt hook. The tongue piece at the upper end of the free falling rods is not situated in the centre line of the apparatus, but somewhat to one (the left) side, in such a manner that the hooked end of the lever can pass beneath the tongue piece, and hold the lower boring rods fast, so that when the apparatus is raised these are also raised. Whilst the rods are being raised the pressure of the water on the upper eide of the cap tends to turn the upper part of the lever to the right and the lower to the left. When the boring rods have attained their highest position and commence to descend the have attained their highest position and commence to descend the water pressing beneath the cap tends to turn the upper portion of the lever to the left and the lower to the right, releasing the free falling rods, which then fall rapidly to the bottom. Herr Greifhagen has even used his instrument in a bore hole without water but in this case it must be made to fit pretty closely to the sides of the bore hole; when there is water in the bore hole this is not at all necessary, as an instrument which had been used to bore a hole 185 millimetres (7 in.) in diameter was used without changing the dimensions of the cap with the most perfect success in a hole 235 millimetres (91 in.) diameter. This instrument first came into use in 1860, and has already been successfully employed in the sink-ing of several bore holes on the Continent, its simplicity being one of its chief advantages. M. Clément Purtschet, a French engineer, has used an instrument exactly like Fabian's, but inverted, in the borings for water in Algiers, and while it possesses no advantage over that of Fabian's the exertion required to throw off the lower rols has been found to be greater than that in the original instrument.

SOUTH STAFFORDSHIRE AND EAST WORCESTERSHIRE INSTITUTE OF MINING ENGINEERS.

The monthly meeting of members was held in the Geological Museum, Dudley, on Monday. Mr. Thos. Parton, F.G.S., occupied the chair, and there were present, among others, Messrs. D. Peacock (vice-president), W. Blakemore, T. Latham, R. Latham, D. Rogers, J. Cole, W. G. Hayward, J. Davies, J. H. Bullock, J. Lawley, M. H. Johnson, jun. Mr. Alex. Smith (secretary), &c. A lengthy correspondence between the secretary and Mr. H. M. Morrison was read. It related to the non-payment of subscriptions and the removal of

spondence between the secretary and Mr. I. M. Morrison was read. It related to the non-payment of subscriptions and the removal of his name from the list of members. It was unanimously resolved to support the action of the secretary in the matter. Mr. James Roberts, colliery proprietor, west Bromwich; Mr. George Spruce, colliery proprietor, Priestfield; and Mr. C. H. Treglonn, mechanical engineer, Smethwick, were unanimously elected ortinary members.

Mr. Blakemork then read an interesting paper on "The Faults of the South Staffordshire Coal Field," illustrated by diagrams. The reader said it would be divided into three parts. The South Staffordshire coal field occupied the county from the Clent and Lickey Hills in the south to a point near Rugeley in the north. It was nearly 27 miles long, and had an average breadth of six miles, and was bounded by Permian and other Red Sandstone rocks. There were supposed to be no great approximately parallel lines of fracture or disturbance running from north to south, and which have been believed to be the boundaries of the field. The determination of the nature, character, and extent of the faults was of the greatest importance, as affecting the commercial interests of the country. The Institute was to be congratulated on the fact that the Sandwell sinking had demonstrated that at least the coal and Thick coal was a will activate that crivinally pointed out as the houndary and had demonstrated that at least the coal and Thick coal was a mile outside that originally pointed out as the boundary, and, as it was highly probable the Perry and Hamstead sinkings would be successful, the boundary would be increased by about two miles. It was pleasing to know that on the north-eastern side of the Walsall Silurian bank there were indications of great moment to geologists and those interested in collieries and the coal trade. Mr Blakemore then sketched the faults of the district alluded to, and said there was a probability of coal under Sutton Park, and so the Staffordshire and Worcestershire coal fields were united. During the last 25 years the Great Western boundary fault had been pierced in many places. There were operations going on, but all engaged were pledged to secresy. He had reason to believe, however, that the Permians had been found. The writer had a strong opinion of the existence of coal on the western side of the Sedgley the existence of coal on the western side of the Sedgley limestone anticlinal, although the view was opposed, and he had hope that coal being found would show the connection between the Stafford-shire and Shropshire coal fields. There were indications of considerable value of this in working along the boundary fault from the south northwards as far as the Oldheath Colliery, where the mines cropped to the fault, and shelved out one seam after another. The Great Western boundary fault had not been worked up to, nor its existence satisfactorily proved at any point north of Mr. Fryer's colliery at Heath Town. In conclusion, and in support of his theories, Mr. Blakemore said the results of working along the eastern and western boundary faults had given 526,000,000 tons of coal to and western boundary faults had given 526,000,000 tons of coal to the district, which regardless of future discoveries had given their venerable coal field a 50 years lease of life. This did not include the coal under the Rowley Hills, which with other faults would be treated in a separate paper. In the discussion which followed, Mr. Homer (North Staffordshire) mentioned some interesting details connected with explorations in this district as tending to show coconnected with explorations in this district as tending to show corelation to other fields. He suggested to all the members that sections showing the strata of all pits sunk at the edges of the various fields should be given to the Institute. Mr. Peacock urged the adjournment of the discussion, so that the paper could be printed and full justice done to it. Ultimately this was agreed to.

Mr. Henry Johnson, jun., read a paper on his "Improvements in the Construction and Lubrication of Collery Tubs and Wagons."

He commenced by showing what a serious item lubrication was in

in the Construction and Lubrication of Colliery Tubs and Wagons." He commenced by showing what a serious item lubrication was in a large colliery. One of the changes he proposed was to give the tub an underframe, made so that the tub could be taken off and another fixed an This result are considered. tub an underframe, made so that the tub could be taken off and another fixed on. This would save many hundreds of frames, for when an ordinary tub was worn tub and framework were thrown away together. (Hear, hear.) Mr. Johnson then technically described how the framework was made, and how the lubricant was supplied to the wheels and axle bearings. The underframe was a great support to the tubs, which under ordinary ones soon gave way with the continual flinging in of heavy coal. Mr. Johnson then exhibited another tub with an enlarged top, to carry extra coal without enlarging the framework. Model No. 3 was on an novel principle, and was specially adapted to the many sharp curves in the underground was specially adapted to the many sharp curves in the underground tramways of their district, where loose wheels and loose axles were best. Mr. Johnson technically described his tubs, and claimed for them—adoption of principle to existing tubs, hollow axles of a diameter stronger and not so likely to break as present axles, saving in time and trouble in lubricating, easy disconnection and cleaning, processers of oil. All the tubs had been thoroughly tasted at the no escape of oil. All the tubs had been thoroughly tested at the Sandwell Park, and the tubs adopted.

The models were then critically examined by the members, and

Mr. Johnson, in answer to a question, said no difficulty had been

experienced during frost.

Mr. Homer gave Mr. Johnson a cordial invitation to North
Staffordshire to see a tub which lifted at once from its framework

for transmission by canal.

A hearty vote of thanks was given to Mr. Johnson,
Mr. ALEXANDER SMITH (Secretary) asked whethe A hearty vote of thanks was given to Mr. Johnson, Mr. ALEXANDER SMITH (Secretary) asked whether a syllabus of subjects and some directions as to text books could not be given to students who wished to pass the examination for mines' managers?—Mr. Homer, Mr. Blakemore, and Mr. Peacock thought it would be most dangerous to publish anything of the kind.—Mr. Blakemore said any bona fide applicant could learn what were the subjects on which he would be examined.—Mr. Peacock said that the applicants might take it for granted that practical management claimed a large share of attention.—The Secretary announced that Mr. Frederick North, a member of their Institute, bud been claimed a large share of attention.—The SECRETARY announced that Mr. Frederick North, a member of their Institute, had been selected by the Government to go out to South Africa, and report on the best means of working the coal of that country in order to make it a commercial and pecuniary success. Geologists had reported on the coal fields, and now Mr. North had gone out to put matters in working order. (Applause).

MIDLAND INSTITUTE SCIENTIFIC SOCIETY.

At the monthly meeting of members, on Saturday, a pape At the monthly meeting of members, on Saturday, a paper was read by Mr. T. L. Parston, on "the Life and Inventions of William Murdoch," who was born, 175t, at Bellow Mill, near Old Cunmoch, Ayrshire, and early manifested a predilection for mechanics; so much so, that before leaving his native country for England he built a bridge over the River Nith, in Dumfri-sshire—a very handsome structure, which is still existing. About the year 1776 or 1777 he came to England, with recommendations to Matthew Boulton, in which he was mentioned as a "clever young engineer." After some conversation, Boulton engaged him at a salary of 15s, a week when at home, 17s, when from home, and 18s, when in London. Murdoch went to Conwall in 1779, to superintend the erection of Boulton and Watt's engines, the success of which brought up a host Murdoch went to Cornwall in 179, to superintend the erection of Boulton and Watt's engines, the success of which brought up a host of competitors and opponents, some of whom, Cornish mine captains, attempted to bully him; but Murdoch, being a "big" man, locked the door of the room, and, using nature's weapons, administered such a drubbing to those he could get at, that they were careful to avoid a repetition of the encounter. He was so determinate in overcoming obstacles, and so successful in perfecting the work entrusted to him, that when it was known that he was about to leave Cornwall the mirrowers had a marting and offered him (1997) were to start the mineowers had a meeting, and offered him 1000% a year to stay and superintend their mines and engines, an offer which he declined, preferring to remain with his employers. Murdoch was married in 1785, to the daughter of Capt. Paynter, of Redruth, and the union was one promising much happiness, but unfortunately his wife died in 1790, at the early age of 24. Whilst Murdoch was in Cornwall he made a locomotive engine supposed to be the first ever made. he made a locomotive engine, supposed to be the first ever made. This was not so. The first locomotive was made by a Frenchman, Cugnot, in 1770. This, however, does not detract from Murdoch's genius, as he did not know of Cugnot's invention. In 1785 Murdoch made a model of an entirely new form of steam-engine, in which the working beam was dispensed with, and a much more compact engine obtained; also, a model of the first oscillating engine ever made, and which was the forerunner of great numbers of steamboat Whilst still in Cornwall he busied himself with experiengines. Whilst still in Cornwall he busied himself with experiments upon gases evolved from various substances by heating, the principal substance being coal. He succeeded in lighting up the offices, and also his house, with coal gas, and when he left work at night lighted himself across the moors to his house at Refurtub by means of gas contained in a bladder beneath a lantern, which held a burner entired to the number of the property of th

a burner suited to the purpose.

Murdoch returned to Birmingham in 1798, and in 1802 he illu-Murdoch returned to Birmingham in 1798, and in 1892 he illuminated the old factory at S sho with gas, the result of his repeated experiments, on the occasion of the Peace of Amiens. At this time gas was regularly used at Soho, and was also taken to Murdoch's own house, a distance of a mile or more, in pipes of various thicknesses, some of which are at present exposed to view. He was the inventor of a method of boring pipes out of marble or stone, a method of ringing house bells by means of air, and a method of using high-pressure steam in the discharging of projectiles. A steam-gun was made by him, and a leaden bullet is still preserved at Soho which was propelled against a target with sufficient force to flatten it into a disc; of 14 in, diameter from an ordinary-sized musket ball. The system of heating buildings by means of hot water circulating through pipes was another of his inventions. rores to nation it into a disc, or 13 in. diameter from an ordinary-sized musket ball. The system of heating buildings by means of hot, water circulating through pipes was another of his inventions. About the year 1830 Murdoch ceased to have any active connection with the Soho Works, and lived in peaceful retirement, at Soho, till his death, in 1839, at the ripe age of S5. The paper was illustrated by several diagrams of early locomotives, oscillating engines, so and the lacture was frequently applicable by the members. &c., and the lecturer was frequently applauded by the members.

Priming of Steam-Boilers.—At the Society of Engineers on Monday (Mr. Thomas Cargill, C.E., President, in the chair) a paper "On the Priming of Steam-Boilers," by Mr. W. Major, was read. The author first drew attention to the great uncertainty which prevailed as to the cause of priming. The ease of the Serapis was mentioned, the speed of which ship, through priming, was reduced from 13 to 9 knots. The author then stated what he thought was the cause—friction of steam globules against impurities floating in the water. To overcome that lubrication was needed. Tallow and oils had been beneficial for that purpose, but unfortunately had produced graver evils. Having tried many lubricants, the author found the purest rectified petroleum a perfect remedy, and he enumerated the advantages gained. He then explained his mode of application by reference to drawings, and stated the satisfactory results. He then menence to drawings, and stated the satisfactory results. ence to drawings, and stated the satisfactory results. He then mentioned two cases of collapsing of flues, in consequence of thick coatings caused by fatty and other particles carried over from the surings caused by latty and other particles carried over from the surface condenser, and preventing the access of the water to the internal parts of the boiler. He considered that this collapsing of flues caused the disappearance of many steamers, which were never heard of again. He pointed out, in conclusion, that the use of rectified petroleum would not give rise to such accidents.—At the last mesting the following gentlemer were duly elected members—Mr. John Johnson; Lieut. W. H. Bixoy, U.S. Army; M. Jose S. Camacho, Mr. Alfred Le Grand, Mr. Robert Sutcliff, Mr. Joseph W. Wilson, jun, and Mr. Frederick Pontifex.

THE CHINESE POLYTECHNIC INSTITUTION AT SHANGHAL-The THE CHINESE POLYTECHNIC INSTITUTION AT SHANGHM.—The gentlemen in this courtry identified with the promotion of Western Knowledge in China Laving been much impressed with the popular science lectures which have been for some years part delivered at the Royal Polytechnic in London by Mr. J. L. King, F.G.S., determined a short time since to purchase the whole of the co-tly apparatus necessary for imagranting similar lectures at Shanghai, and on Wednesday the Chinese Ministers and suite visited the institution in Regent street, to witness some of the most interesting phenomena, connected with the plarist to witness some of the most interesting phenomena connected with the p-dorisation of light and other branches of optics, as shown by a new apparatus intended for an institution at Shanghai. The demonstrations were conducted by Mr. King, who delivered a brid lecture explanatory of the scientific principles which determine the phenomena, and who stated that the occasion derived his chef interest. From the fact that it marked an awakening in the Chinese mind to the importance of scientific instruction. The Chinese institution owed its origin mainly to the influence and exertions of Sir Walter Medhurst, lately our Consul in Shanghai, who was Chairman of the Shanghai committee, and Mr. Fryer who acts as honorary secretary. Their views have been energetically supported by our anneasodor, Sir Thomas Wade, and by many of the leading mandarins, among whom may be mentioned Li-Hung-Chang, whose name has a European celebrity, Fong Chu ju Taota, of Shanghai; Han-Tsuch-Tsun and his sons, who are well known throughout their own country for their technical skill and scientific enlightenment, and by many others who favour the importation of Western knowledge of every kind as calculated to render the most important service to their country. The design of the new institution is to make a trust step towards satisfying this patriotic aspiration. A building his recently been erected at the city of Shonghai, within which lectures are to be given and interesting apparatus and processes shown; and likewise a reading-room provided with suitable works is already in active operation. A new scientific magazine, in the Chinese Language, has been extabilished in Shanghai, edited by Mr. Fryer, the honorary secretary of the institution. An influential committee of co-operation with the Shanghai committee has been made. The direct on that the apparatus just exhibited has been made. The directors of the London committee met, and it is under their direction that the apparatus just exhibited has been made. The directors of the London committee nee secture gave great satisfaction to his visitors, and was in every respect most successful. Among the articles being sent out to China by Messra. Bourne and Co. are several of their new high speed engines, which are believed by the most competent judges to be destined to become the steam-engines of the furure. One of these engines will be employed to drive a Tanite emery wheel, which acts like a rotating file in rapidly polishing metals, and sharpening cutting instruments. This machinery attracted much attention. The most promising feature in connection with the present movement in China is that it is adopted and pressed on by the Chinese themselves. The first step in all such innovations is the most arduous, and it appears now likely to be taken with success. receive their guests, who were both numerous and distinguished. Mr. King's cture gave great satisfaction to his visitors, and was in every respect most suc-

ROYAL CORNWALL POLYTECHNIC.—The forty-fifth annual exhibition of this society is announced to open at Falmouth on Aug. 28, and that Prize Lists and all other necessary information will be furnished on application by Mr. Edw. Kitto, the secretary. At the resent time the desirability of introducing more economic processes for making ore marketable is especially apparent, and young miners may well be advised to compete for some of the prizes offered for improvements in this direction; for they should remember that the intrinsic volue of the prizes is but little compared with the great advantage that must accrue in securing the adoption of an invention, the practicability of which is certified by the award of the Council of the Polytechnic Society. The prizes of this class include—a Premium by the the society for improved Machines for, or modes of, Dressing Ores; a Premium is offered by the society for Collections of Ore and Country in which the the relations of one to the other are carefully marked; and three Fremiums, in books, by the Elitor of the Alunay Journal, value &l. 3s. for the best, 2l. 2s. for the second best, and 1l. 1s. for the third best papers, by practical miners or others engaged about mines, upon a method, mechanical or chemical, of making marketable, with commercial advantages, orce or minerals raised from mines in Cornwall or Devon, and intherto regarded as worthless. The books to be chosen by the writer of the paper. In the case of mechanical methods not in actual use, it must be demonstrated that the apparatus is simple, durable, and not liable to get out of order. In the case of chemical methods not in actual use, samples of the products in the various stages must accompany the paper, in proof of the practicability of the process. It is much to be hoped that this year the number of competitors for these prizes will be large, and that their efforts will be such that the Council will be justified in awarding all the premiums offered.

MINING AND STOCK EXCHANGE NEWS OF THE WEEK. Messrs, F. W. MANSELL and Co. (Sworn Stock and Share Brokers) 43 and 43A, Palmerston Buildings, Old Broad-street, write to us as

Isabelle (Gold and Silver).—This company holds an extensive series of Gold and Silver Mines, comprising 9425 linear feet upon a mineral belt of six parallel gold and silver lodes, situated in Scandinavian Canyon, Silver Mountain, Alpine County, California. The sett of 9425 linear feet on the centre of the six lodes, "with all dips, spurs, and angles," includes I kewise all lateral extensions and underlies of the several veins as well as an admirable mill site, with water-power and timber ranches.

These Gold and Silver Mines were originally purchased upon the re-

These Gold and Silver Mines were originally purchased upon the recommendation of Mr. Lewis Chalmers, the manager of the Exchequer and I.X.L. Mines, which are immediately adjacent to this property. The Isabelle Gold and Silver lodes run almost parallel on the south to the I.X.L. Company's mines, which again are parallel south to the Exchequer mines. Authorities who are generally acknowledged as disinterested have for many years in their published official reports to the United States Government clearly enunciated as an axiom that only horizontal or stratified deposits of silver ore, aqueous in origin, and usually accompanied by a large proportion of hase in origin, and usually accompanied by a large proportion of base metals, are found in limestone or dolomite rocks. No matter how rich the mines, how easily worked or the ore reduced, these mines have no permanency. When exhausted there is then seldom any clue afforded to other "pockets" or strata of a similar evanescent description. However promising they appear superficially, not even an expert can ever exactly tell beyond the "pick" when such deposits "pinch out." Even if, perchance, again found they may be irregularly placed in some locations not covered by title. They frequently change their character in depth; silver-lead mines, which are generally met with in limestone formations, may gradually lose are generally met with in limestone formations, may gradually lose the silver which rendered them valuable, while the lead increases in purity and quality. On the other hand, in true fissure years of igneous origin, where the silver ore is found free from base metals, but carries with it a fair percentage of gold superficially, such gold almost invariably increases in depth, as is the case in the Consolidated Virginia and the Isabelle Mines.

English investors are apt to confound all mines in one category,

English investors are apt to confound all mines in one category, without reference to their distinctive geological features. It is not unworthy of consideration on this side of the Atlantic that Americans have as yet never sold in England, as may be judged by results, a fully developed mine upon a well-defined true fissure vein. To secure similar profits from mines of this established permanent character English investors require to imitate Americans, and wisely choosing virgin ground in accordance with geological principles performing the work for themselves ab initio, instead of paying large

ums in cash for mere shells.

sums in cash for mere shells.

The geological formation of the Isabelle Mines consists of eruptive rocks, the lodes consequently have well-defined walls, with the usual accompanying "clay selvages," which in such cases are properly esteemed unerring indications of value, and of a true fissure aracter, created at unknown and unapproachable depths by plutonic agencies.

The dip of fissure veins is nearly vertical, or within a limit of 30° from the true perpendicular. In this splendid district gold and silver lodes are as a rule found to run within a few degrees of magnetic north and south, allowance being, of course, made for deflec-tions caused by configuration of "country." These granite and por-phry walls—not limestone—are the true matrix of gold and silver ore in fissure veins, which being of igneous or plutonic origin are geologically asserted to be inexhaustible, increasing in quantity and value as depth is attained in their development. It may also be mentioned here that the nearer a gold and silver bearing vein approaches the vertical of 90° in its dip the richer or purer are the deposits of ore, because this indicates that the plutonic mineralising agency which created the vein originally has been in degree stronger in its cruptive action upwards.

As an illustration of this it may be mentioned that some of the

mines upon the Comstock Lode, not 40 miles distant in a northerly direction, with similar characteristics, are extracting rich gold and silver ore at the immense depth of nearly 2000 ft. from surface, thus

practically proving the permanancy of true fissure veins, and at the same time establishing the faith to be placed in such lodes.

The salient points of the Isabelle Mines are—(1) A mineral belt of six parallel gold and silver lodes, a feature recommending them to every practical miner; (2) a mining sett of 9425 linear feet, four times the extent of leading dividend mines elsewhere; (3) true fistimes the extent of leading dividend mines elsewhere; (3) true fis-sure veins of igneous origin, and in virgin ground; therefore, geo-logically considered, inexhaustible deposits of gold and silver ores; (4) the probability that in depth these various lodes may be found to converge into one vast mass of mineral, compact in quantity and uniform inrichness; (5) titles clear and unimpeachable; (6) capital extremely moderate in comparison with more prominent mining companies, consequently dividends reckoned as a percentage upon capital indicate by comparison greater inducements, with less risk to investors; (7) the vendors have such entire confidence in the value of the mines that they prefer to accept paid-up shares in lieu of any other payment; (8) a competent and reliable resident director, who is already thoroughly acquainted with the mines, and has been personally known for many years to the directors; (9) water and timber sufficient for all purposes, free, except for the necessary labour cost; (10) labour readily obtainable, and mining operations not prevented by winter; (11) at Carson City, 50 miles distant, there is the United States Mint, to which bullion can be sent for conversion into exist. States Mint, to which bullion can be sent for conversion into coin

States Mint, to which builton can be sent for conversion into coin; (12) there is very little deadwork to start with, because the proposed tunnel follows the course of the lodes; (13) directors accept no fees, their remuneration being a percentage upon the net profits realised.

Assays of the ore taken from superficial depths merely show an average yield of \$108 (22L) and \$62 (13L) per ton in silver alone. The cost of mining and reduction of this ore into bullion is estimated at what \$1.5 (24) are transferred to the cost of the property of the cost of

The works must have sufficiently progressed to admit of a force of men being employed in exploitation numerous enough to achieve this, or more. The production of a mine is in proportion to the strength employed, and to secure a continuous supply the progress of development must be kept well ahead of the extraction of mineral. The above estimate is based upon low-grade ore, and it remains with each to draw conclusions from premises or arguments mankly tendered for consideration without greater bias than seems most inseparable from the subject. Prof. Raymond, in one of his official reports to the United States

Prof. Raymond, in one of his official reports to the United States Government, gives a tabular statement of twenty companies working in the aggregate 16,000 linear feet on the Comstock lode, which affords reliable data. Characteristics of that lode, and of ore taken from it, are almost identical with those of the Isabelle, from which it is distant about 40 miles. In one year the Comstock Mines yielded 400,000 tons of ore, yielding \$21,000,000, equal to 4,200,000% sterling. Accordingly each of these mines has an average of 800 linear feet of lode, and an output of 20,000 tons (70 tons per day) each, of the value of 210,000% sterling per annum. At the same rate of ascertained productive value, if measured only by comparative extent of mineral ground, the Isabelle Mines, when developed sufficiently, ought to turn out 645 tons per day, equal to 235,625 tons per annum, ought to turn out 645 tons per day, equal to 235,625 tons per annum, which at the same valuation would be worth 2,591,875l. sterling. But as the Comstock Lode is productive only about one-seventh part of its entire length, this divisor may be fairly applied to reduce the preceding figures into the more credible totals of 92 tons per day, or 33,660 tons per annum, valued at 370,267l.

In previous papers upon the Isabelle Mines we have set forth the mineralogical reasons instifying the onjugate that these one of the

In previous papers upon the Isabelle Mines we have set forth the mineralogical reasons justifying the opinion that at least one of the veins parallel to the Great Mother Lode—called by the experts Big Mother Lode—will in depth become essentially gold-producing. Additional testimony upon this important point, as affecting the remunerative future, is afforded by no less an authority than Mr. John J. Cooper, whose ability and integrity as a mining engineer are vouched for by the eminent firm of Messrs. John Taylor and Sons; moreover, Mr. Cooper's family connections in this country are in themselves an absolute guarantee of good faith. During a recent inspection of the Isabelle Mines, Mr. Cooper says: "It is very seldom you will find lodes on surface so thickly impregnated with mineral as is the case with these lodes." . . . "There must be large bodies of solid mineral below; it has been proved by their neighbour, the Exchequer, that the rich ore bodies in this district are not on surface, although the indications in this case are that they are not far off."

although the indications in this case are that they are not far off."
The Exchequer, I.X.L., and Isabelle are considered by Mr. Cooper
to be the main lodes of the district, and he will be very much disappointed if, when they are developed, they do not turn out imense riches.

As to the expenditure necessary to bring about profitable results. r. Cooper says: "It is evident these Isabelle lodes will not be expensive to develope, not nearly so much so as many others in the neighbourhood; and I must say I consider this will turn out a very valuable property; the mineral being continuous throughout the valuable property; the mineral being continuous throughout the lodes on the surface indicates that it will be so in depth, but instead of its being scattered throughout the rock it will be found in

In concluding this notice, we may refer to one of the most ma-terial considerations in an enterprise of this character—that perfect safety for English investors in any foreign mine, remote from home rule, necessarily depends upon the strict integrity, truth, and ability, under all phases, in circumstances of the local management abroad, London directors, no matter how respectable or attentive to their duties, are as a consequence of geographical distance in some measure circumscribed to administrative functions of a financial character. Ability, economy, and fertility of resource on the part of the executive at the mines are qualities upon which English investors should essentially rely for those profits which the original premises safely warranted. In the case of the Isabelle Mines, the directors have wisely selected as resident director a gentleman known to them for many years, and who originally recommended the property, having been for a long time resident on the spot, and who would not risk an established reputation unless convinced that a more thorough and scientific development of these mines would add lustre to his career

as a mine manager.

The directors are—The Right Hon. the Earl Poulett, Chairman of The directors are—the Right Hon the Ext Foulett, Chairman of the Exchequer Gold and Silver Mining Company; Major-Gen. Chas, Campbell, director of the Exchequer; Mr. Robert Gillow Dunn; Major-Gen. F. A. Campbell, C.B., R.A., Woolwich; Captain Daniel Bayley, Oriental Club; Mr. Henry Syme, F.R.G., director of the Exchequer; and Mr. Lewis Chalmers, resident director.

I. X. L. (Gold and Silver).—Some time since it was mentioned in these papers that the I. X. L. ore, like the Comstock, contains gold, which in relation to silver increases with depth. This is substantiated by twelve assays of the I. X. L. ore, yielding an average of \$27.88 for gold and \$240.28 for silver=\$346.99, or 76/, per average of \$27.88 for gold and \$240.28 for silver=\$346.90, or 75%, per ten. I. X. L. has also the same geological formation as the Comstock, and in the same mineral belt, the lodes having similar clay selvages, separating the country rock from the quartz; the character of the quartz is identical. When I. X. L. was first discovered a general rush of miners took place from the Comstock Mines, and it was only through sheer improvidence that I. X. L. ever fell into the hands of English owners. Recent developments at this and the other mines in Scandinavian Canyon are again creating excitement, miners from the surveyunding districts (including Comstock) flocks. miners from the surrounding districts (including Comstock) flock-ing in great numbers to Silver Mountain City.

In the early days of this district, when at I.X.L. the richest de-

In the early days of this district, when at I.X.L. the richest description of ruby silver had been found just under the cropping, eager prospectors covered the mountain, especially in the immediate vicinity of the pioneer discovery, and before the year had expired nothing was left in the shape of a ledge or outcrop to locate; the same, taken up two or three times over on some of the spurs or angles of the I.X.L. lode, and all found a place in the records of the then formed Silver Mountain Mining district. Upon this general rush to the New El Dorado buildings of all kinds were erected in anxious haste, but very little useful work was done. Capitalists offered exorbitant prices, but not enough to satisfy the rapacity of the owners, who would neither work themselves nor sell to those the owners, who would neither work themselves nor sell to those who would. The reaction came, the fitful fever died out, capitalists left in disgust, and among the few mines at which any attempt was made at systematic development was this I.X.L., the stock of which continued to command a very high premium, and the capital injudiciously expended in superficial workings, and wasted in ill-digested plans, would, had it been applied to deep development in a systematic manner, have placed the I.X.L. in the foremost rank of a systematic manner, have piaced the LALL in the foremost rank of producing mines. As it was, however, some \$50,000 was taken from the ore stopes, Mistake seems to have followed mistake; the ore required roasting, and 50 per cent. was lost by neglecting this precaution; one sample of 50 tons was run through the Whiteside mill without being roasted, and even then gave \$70 instead of \$140. As we have pointed out upon previous occasions, these few facts sufficiently account for the apparent commely of such a property.

As we have pointed out upon previous occasions, account for the apparent anomaly of such a property seming into the possession of English owners upon such favourable coming into the possession of English owners upon such involvable terms. Hitherto Americans have never sold in this country a de-veloped mine with a true fissure vein in the porphyritic formation; and as results are proving in the Comstock Mines and in the Ex-chequer the deeper the works the greater the percentage of gold and silver, it must be admitted the market value of I.X.L. shares to-day cannot be accepted as any guide of their investing value in

the almost immediate future.

Ruby silver in the richest form, and occasionally native silver, are found, the quartz clear and lively, quite up to the standard of excellence demanded by the most exacting expert or devoted admirer of quartz as a gold and silver bearing gangue. The ore is an antimonial sulphuret silver, black sulphuret, and dark red and light red silver over. The antimonial sulphuret or misgrayite contains 365 ner. The antimonial sulphuret, or miargyrite, contains 36.5 per about \$15 (34) per ton. Assuming an output of 50 tons per day, and the average gross value at only \$50 (84) per ton, this gives \$2000, or 4006 per day. Deduct (in order to cover all expenses probable or improbable for cost of mining and milling) \$20 per ton, multiplying net result by 300 working days, the annual net returns are 94,5004, But will the mines yield 50 tons per day? Certainly; but not at But will the mines yield 50 tons per day? Certainly; but not at possible appreciation of the future of I. X. L., when fully developed.

The preliminary expenditure has been incurred, much unprodu though imperatively indispensable work accomplished, if future results of I. X. L. Mr. Lewis Chalmers, the manager, shows the greatest confidence by having undertaken to superintend the development of the mine until it pays dividends without any development of the mine until it pays dividends without any remuneration whatever beyond his bare expenses; and the influential directors (all very largely interested in the property) decline to accept any fees except out of net profits.

The latest official advices (dated March 19) state that the manager of the profits out any re-

The latest official advices (dated March 19) state that the manager was then busy getting the hoister overhauled and erected preparatory to sinking to the 400 ft. level. The north drift was in 525 ft. from cross-cut on the 200 ft. level, 12 ft. 6 in, having been driven during the week. This drift is in a well-defined ledge, 4 ft. thick, and is running 20° west of north, and pitching 55°; 3ft. 6 in, of solid quartz in face, which is looking a good deal like the quartz in the old upper tunnel. Considerable water issuing from face. The rise was up 160 ft. from drift, 12 ft. having been raised during the week; it is in fine ledge matter going along the hanging wall; the footwall has not been seen for over 100 ft.; the ledge is 4 plarently big. The Ophir ledge, on the 200 ft. level, was looking well. The engine had been taken to pieces and hauled to the LX r

rently big. The Ophir ledge, on the 200 ft. level, was looking well. The engine had been taken to pieces and hauled to the I. X. L. hoisting-works; the foundation timbers were all ready.

The following are the directors—
The Right Hon. the Earl Poulett (Chairman of the Exchequer Gold and Sliver Mining Company, Limited), Hinton St. George, Somerset, and I. Palice Gate, W.; the Viscount Lord Ranglade (Chairman of the Conservative Land Society), the Carlton Club: Lieut-General Henny Reny, R.E. Clamicarde Gardens, W., and Oriental Club, W.; W. G. Remaine, Esq. C. B. Clamicarde Gardens, W., and Oriental Club, W.; W. G. Remaine, Esq. C. B. Clamicarde Gardens, W., and Oriental Club, W.; W. G. Remaine, Esq. C. B. Clamicarde Gardens, V., and Oriental Club, W.; Theory, Old Windson; Major General Charless Campella (Upretor of the Exchequer Gold and Sliver Mining Company), 18, Gloucester place, W., and Portland Club, W.; Freen, Henny Scott, Esq., Bishopsdown Grove, Tunbridge Wells: Colonel Byser Sera, Cer., 1 Morpeth Terrace, S. W., and the Guards Club, S. W.; Henny Syng, Esq. (Director of the Exchequer Gold and Sliver Mining Company), 60, Palace Gardens-terrace, W.

EXCHEQUER (Gold and Silver).—The latest official advices (dated EXCHEQUER (Gold and Silver).—The latest official advices (dated March 19) announce that the mill was started on Saturday, and that the furnace was in full blast. With the exception of one pan and one settler, which were not quite tight, everything was running well. In order to fill up crevices and grind the new shoes and dies of the pans, the mill was running on low-grade ore. The furnace tests would be made on first-class ore in a few days. At the mins the No. 2 stope in the 100 ft. level was driven 9 ft. during the week; the vein, 2½ ft. of No. 1 ore, and 2 ft. of mixed ore. The No. 1 stope in the 260 was driven 22 ft.; vein 23 in. and 2 ft., mixed with first-class ore. No. 2 stope in the 300 was driven 12 ft.; vein 2 to 5 ft., 1 ft. of good ore. The 400 drift was driven 6 ft., and two sets of timbers put in; vein 2 to 3 ft., with good ore. The Accacia Tunnel was driven 4 ft. Everything looked well in the mine, and the foreman adds there will be no trouble to keep the mill running, under date March 21 the manager writes—"To-morrow we fush running, on low-grade ores. After to-morrow we commence making running on low-grade ores. After to-morrow we commence making the furnace tests, and I hope to be able to furnish you with cheering results

Referring to the Silver Mountain district the Alpine Chronicle says: "The great revival that is now progressing in our county—but more particular, in this (Silver Mountain) district—in mining is attracting attention on the on side, and daily we notice new faces in the street. Our companies are preparing for a vigorous mining campaign the coming summer, when competent mine and mechanics—steady men—will find remunerative employment."

and mechanics—steady men—will find remunerative employment. The same authority, lated March 17, referring to the Exchequer, says. "This morning the Exchequer Mill and O'Hara Cha nplon Furnace commender ork on Exchequer ore. The people of Monitor are expecting 'big things.' The nost notable event of the week, however, is the starting up of the O'Hara Chenologie and the starting up of the O'Hara Chenologie at the successful working of which cannot be doubted, its success at Pearing rowing that such a process for reducing our ores is all that we require to place this cannot be doubted. The Alland of the mining counties of California."

The Alland Chronicle also was a "The Alland Chronicl

Alpine at the head of the mining counties of California."

The Alpine Chronicle also says:—

"Elisha B. Smith of San Francisco, arrived on yesterday's stage, under an engagement with Manager Chalmers to take the superintendence of the Exchenger mill and furance. A long acquaintance with Mr. Smith enables us to say that Mr. Chalmers could not have secured the services of a more competent superintendent. Having had great and manifold experience in silver mining in Mexico, having resided in that God-forsaken country, engaged in mining operations, tweive year, he is just the man we require to manipulate Alpine ores."

Another authority has the following:—

"The Exchequer mill has been entirely rebuilt. It has 18 stamps, and has in connection with it an O'Hara Champson Furnace, which is capable of working 30 tons of ore a day. This mill has been planned by Manager Chalmers with a view to its doing its work with as sittle manual labour as possible, and is one of the best-appointed mills on the Pacific Sope. It has been placed by Mr. Chalmes under the full control of E. B. Smith of San Francisco. Mr. Smith had charged the O'Hara furnace at Peavine when it made its successful run on Poe Consolibate, ore, and we are satisfied that the new mill will be run successfully under his management."

The ores of the Peavine district are very repollious, containing the content of the content of the property of the Peavine district are very repollious, containing the content of the content of the property of the Peavine district are very repollious, containing the content of the content of the property of the Peavine district are very repollious, containing the content of the content of the property of the Peavine district are very repollious, containing the content of the property of the Peavine district are very repollious, containing the content of the property of the Peavine district are very repollious, containing the content of the property of the Peavine district are very repollious.

The ores of the Peavine district are very rebellious, containing antimony, arsenic, copper, zinc-blende, and lead, and all previous attempts had failed to reduce them. Mr. O'Hara undertook to eret a furnace upon the condition that if he did not extract 80 per cent, of the precious metals contained in the ore he should not receive anything for his work; the furnace was built, with the result that 100 to 95 per cent, was easily obtained assaying \$100 per to. The 90 to 95 per cent. was easily obtained, assaying \$100 per ton. The same character of ore had been previously taken to Reno and resisted by a Stetefeldt furnace, but no bullion was obtained. The latest advices from Peavine state that the Consolidated Poe Mine (whence was taken the ore treated by O'Hara) was turning out \$10,000 to \$15,000 in bullion per week. The following are the directors of the

SI5,000 in bullion per week. The browning are conserved, and 7, Pales Exchequer Company:—

The Right Hon, the Earl POULETT, Hinton St. George, Somerset, and 7, Pales Gate, W.; the Right Hon, the Lord LOUTH, Louth Hall, Ardee, and the Jusier United Service Club, S.W.; Major General Charles CAMPBELL, 18, Glouester place, Hyde Fark, W., and The Oriental Club, W.; Mr. W. G. ROMAINE, C.B. The Priory, Old Windows: Mr. SAMULE, SMITH, 18, Strattord phace, W., and The forland Club, W.; Mr. HENRY SYME, F.R.G.S., 69, Palace Gardens terrace, W.

GENERAL MARKETS.—The semi-panic which in the earlier part the week paralysed all stock markets was succeeded by compare tive steadiness, resulting in a moderate recovery in some classes of securities. This was followed again by severe depression, produced by the receipt of reduced prices from the continental Bourses. Home suffered far less than foreign, as is reasonable, considering that the cause of trouble comes from the foreign direction. from a few investments in railway stocks the public seem to be still doing very little in the Stock Exchange, where the great bulk of the business has consisted of sales of foreign stocks on foreign account. Home securities should certainly not suffer in the way they do, for investments in this direction are likely to be stimulated if war occur, but there is yet reason to hope that one or other of the probable combatants will make concessions rendering peace more

MANUFACTURE OF AMMONIA.

In some cases the gases evolved in blast-furnaces used in manu-In some cases the gases evolved in blast-furnaces used in manufacturing iron and the cyanogen combined with them are allowed to escape into the atmosphere, but in other cases they are conveyed in tubes un let steam-boilers to generate steam. With a view the better to utilise them Messrs. ISRAEL SWINDELLS, of Warington, and ROBERT LANCASTER, of Widnes, propose to inject superheated steam into the tubes containing the gases and cyanogen, either before or after they act on the steam, boilers, the steam, cases, and cyanogen or after they act on the steam-boilers, the steam, gases, and cyanogen or after they act on the steam-bollers, the steam, gases, and cyanges thus combined are passed through incandescent fuel, and the vapours thus formed are condensed by any well-known process to produce ammonia. In carrying out the invention they take from any conveniently formed blast furnace for smelting iron the gases and cyanogen therein generated, and pass such gases in combination with highly autority formed them. ammonia. nogen therein generated, and pass such gases in combination with highly superheated steam through any conveniently formed pipaer pipes into a closed and highly heated iron retort or clay furnace, of suitable size and dimensions, and erected in a vertical or other position, into which incandescentfuel or other material may be inserted. In superheating the required steam they prefer to adopt the means employed in iron-smelting furnaces for heating the hot blast.

The combination of gases thus emitted in the latter process are further conveyed through any convenient form of pipe into a solution of lime, cream of lime, or other caustic base, when it is found

tion of lime, cream of lime, or other caustic base, when it is found needful to absorb all or any portion of carbonic acid which may exist in conjunction with the remaining gases. The residue of these gases are also further conducted through suitably formed pipes into a highly heated closed vessel or chamber filled with broken bricks or other material to combine the latter gases, and thereby produce ammoniacal gases, which gases may be passed through, cooled down, and condensed in towers constructed of any convenient material,

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form, and dimensions, into which broken bricks or other material form, and dimensions, into which broken bricks or other material may be placed, or by any other known process of condensation. In the manufacture of muriate or other salt of ammonia the muriatic or other acid must be poured into the top of the condensing towers to meet the ascending vapours, but without the use of acids caustic and carbonate of ammonia may be produced.

LANGNESS (ISLE OF MAN) COPPER MINE.

Few mining enterprises in the Isle of Man have been watched Few mining enterprises in the 1810 of Man have been watched with greater interest or have excited more general attention, amongst Many people particularly, than that which this week comes before Many people for the first time as the Lungness Mining Company (Lite public for the first time as the Lungness Mining Company (Limited), which is to be registered under the 1810 of Man Companies gled), which is to be registered durier the 1ste of Man Companies et. The new company's property is a large one, and forms a great at of the promontory of Langness, in the south of the island, with right to explore for minerals under the bed of Castletown Bay for right to explore for minerals under the bed of Castletown Bay for art of the promontory less than half-a-mile from low-water mark. The proargain to Gyp. and less than half-a-unile from low-water mark. The properly has been thoroughly explored by a small private company, perly has been thoroughly explored by a small private company, who have been at considerable pains and have spent a large sum of money in proving the challe of the property. Their discoveries, which are faithfully set furth in the prospectus, are indeed of rare value. They have two furth in the prospectus, are indeed of rare value. They have two very powerful lodes, with outcrops of rich ore, of 10 and 20 in, thick respectively, and several st one, well-defined cross lodes, and their risi operations have proved beyond question the strength of both these parallel veins. The large, or 20 in, vein has been sunk upon to the greatest depth, and it carries the same high-quality ore every inch of the way. This and one 10-in, vein (which has not been as the converded underlay towards each other, and it is fully expected Dise greatest depth, and to carries also same angu-quanty of severy inci of the way. This and one 10-in, vein (which has not been as fully proved) underlay towards each other, and it is fully expected that they will form a junction at from 40 fms. to 50 fms. in depth, where the mining men who have inspected the place predict a large boly of ore will be found. Some of the stones of solid ore which have been got out in these trial operations weigh over 3 cwts., and in one blast alone a mass of ore was liberated which afterwards was found to weigh half-a-ton. It is no wonder that, with such such was found to weigh half-a-ton. It is no wonder that, with such such as the suc essful preliminary results considerable excit-ment should exist in cestait premarks the state of the shares and there is 1.4tle doubt that the shares will be rapidly emberibed for. The confidence of the insular public is the stronger because the Languess adventurers have evinced no desire to thrust the property into the market, but have gone on developing it as far the property into the hardes, but have gone on developing it as that as their means would allow until they are able to show a bona fide increament, with unusually excellent prospects of early results. And hesides this it long ago cozed out that Prof. Warington Smyth, the besides this it long ago cover out that Frot. Warington Smyth, the Government Surveyor, had expressed a high opinion as the merits of the property, and the excellent prospects of the company. It was not likely that so promising a place could long escape the notice of mining men, and many of these have from time to time visited Langness from distances so remote as London, Devonshire, and Cornwall, and what they have said about it has added to its reputation, and it now stands confessedly on all hands—and has been patential over and over again by men whose names need only be panation as a described over and over again by men whose names need only be mentioned to prove their competency as judges—as one of the finest young mines in the United Kingdom. The copper ore taken out of Languess has been frequently assayed, and it has never averaged

than from about 20 to 25 per cent. of pure metal.

the eapital of the new company will be 45,0002, in 15,000 shares
30, each, of which only one-half will be called up, and it not exted that any further calls will have to be made before returns are secured. The vendors part with the property for the moderate sum of 19,000t, one-half of which they accept in shares. There certainly has seldom been a young mine floated with equal prospects of ss, nor one that has been placed before the public more honestly

MINING ENTERPRISE IN COLORADO.

The development of the mines belonging to the Revenue Mineral Company having so far progressed as to enable the executive to determine not only the probable ultimate value of the property, but the lest method of hastening the return of profits to the sharebolders, it was determined at the recent meeting to issue the remaining unallotted shares, and thus ensure the utmost possible dispatch in the completion of the works. Considerably more than one-half in the completion of the works. Considerably more than one-man of the capital has been already subscribed, and on Jan. I there was an available unexpended balance of 4731L 3s. 11d. It was explained that the work during the winter 1876-7 upon the Revenue lode laid bare a large quantity of excellent ore in the small section of the mine upon which contracts were let. This ore it was intended to send to market during last summer, but owing to the impossibility of obtaining adequate and safe carriage, and the fact that it was found the mineral was costing twice as much to mine and three ound the mineral was costing twice as much to mine and three times as much for transport by pack animals as will be the case when the wag in road and the low-level tunnel are completed, it was de-cided not to sacrifice the one beyond marketing a sufficient quantity of all grades, so as to practically test the value of the mine, and to guide in selecting the best means of treating and disposing of the

These results are particularly favourable, and exceed the estimates on the bases of which the mine was purchased. Parests of ore from different parts of the mine were sold, varying from 52 ounces to 30 ounces of silver to the ton, one shipment carrying 37 per cent. ead and another running as high as 17 per cent copper, the ole yielding an average of 96 ounces of silver to the ton. The Britannic tunned, which is virtually the key to the entire pro-

The Britannic tunnel, which is virtually the key to the entire erty, has been pushed forward night and day at a cost below estimates, but the continued hardness of the rock causes serious de-lay; at present, however, more than three-fourths of the entire esti-mated length to the Revenue lode is finished, and during the coming summer the network of mineral veins discovered will be explored

summer the network of mineral veins discovered will be explored. From the practical experience now gained, with actual sales of the ore, and a knowledge of the cost of winning it, an approximate estimate of the future of the enterprise can be fairly arrived at. In the following calculation the figures of the superintendent and mine captain are either actual or have been closely considered. There can be no doubt that some of the lodes already tapped are of much value, but for the present they prefer to deal, as has been done since the outset, with the Revenue alone, which is a sufficiently proved mins. The aggregate cost of mining, treating, and conveying to Denver will not exceed \$35 per ton, so that, estimating the value of the ore at only \$75, which is \$7 lower than last year's average, the Deriver will not exceed \$35 per ton, so that, estimating are value or the ere at only \$75, which is \$7 lower than last year's average, the profit would be \$40 per ton, or \$120,000 per annum from Revenue alone. A charter has been obtained for a wagon road, and a mill will be erected. The entire machinery for this mill, including steam-engine, will not 1000 to the 200 tone of low and or provider day which will will cost 10000, to treat 39 tons of low-grade ore per day, which will bring into profit rock that at present is discarded, and will dress it up from probably 20 ozs. per ton to 100 at very small cost. Capt. Tonkin estimates that there is at present, lying in piles around the revenue shafts, at least 700 tons of 50-oz. ore which has been stripped from the ore marketed since the opening of the mine, so as to enrich that portion to bear carriage. This ore will all be brought down The mill besides will crush class ore, and so prevent the advantage that ore-buyers take with the unsampled ore.

The Revenue Mineral Company's property is described as being

most favorably situated. The Decatur Mountain forms the ridge which divides the watersheds of the Pacific and Atlantic slopes. The Revenue Mine is upon what is recognised as the reta madre, or farming the recognised as the reta madre, or The revenue Mine is upon what is recognised as the vela madra, or champion lode of the district, and which almost follows the skyline. Below it in the mountain face, and paralled to it, are half a dozen nineral veins, all of which will be cut by the tunnel now driving. Operations hitherto are said to have been very successful. The ore is delivered at the various reduction works in its raw state, having been first roughly separated by hand from the rock. It is crushed, sized, and further separated by machinery, then "roasted," to drive off the sulphur, again crushed, and next delivered to the "chargers" on the "mining floor," immediately above the furnace-house. It is there carefully mixed with fuel (coke or charcoal), and with iron ore, limestone, or slag, and this mixture is fed into the furnace and ore, limestone, or slag, and this mixture is fed into the furnace at the rate of 15 to 20 tons per diem. About every two hours or so the furnace is "tapped" from below, and the molten metal (base bullion) is drawn off, together with the "matte." The slag is then cleaned

out of the crucible, the "breast" is bricked up again, the smelting goes on as before, till, after several weeks, the fire-brick requires to be renewed, when the furnace has to be "blown out." The base bul-lion consists chiefly of lead, containing some 300 ozs. of silver to the The copper is chiefly contained in the "copper matte," and is ton. smelted by itself.

With reference to the physical advantages of Colorado as a field for mining enterprise it is to be remarked that the State occupies a large area both east and west of the Rocky Mountains. Several of the loftiest peaks of that grand continental range arise in the centre of this extensive territory, one-half of which is a fertile and well-watered plain, destitute of trees, while the western portion is a table watered plain, destitute of trees, while the western portion is a table land with much timber, and with a tolerably good soil. But the mineral riches of Colorado—its gold, silver, iron, and other metals—have engaged a great part of the immigrant population, and many successful undertakings have been established. It is remarkable that Colorado at the present time contains probably a larger resident British population than any State in the Union. Apart from the traveller who is constantly met with—attracted by sport, scenery, or the magnificent climate—there are numbers of young Englishmen settled there, either engaged in stock-raising on the plains or mining in the mountains, and each class helps the other, the mining camps being, as a rule, excellent markets for farm produce of all kinds. The majority of the miners resident at these places are Cornishmen and majority of the miners resident at these places are Cornishmen and Nova Scotians, with a fair admixture of Germans and Swedes. Cornishmen are unrivalled in hard rock; whilst experience gained in the Government works at Clausthal and Freiberg brings German operatives into great demand in the smelting works. Hitherto the ore has been packed on mules and sent to market, either at George-town or to the neighbouring district of Hall Valley. But local works are now in process of construction. The development of Colorado has been only second in rapidity to that of California, and its people are sarguine that, owing to the permanent nature of their mines, they will secure the State as bright a future as could be desired.

ON THE MINERAL PRODUCTS OF RUSSIA.

Russia in Europe, including Poland and Finland, has a population of about 70 millions, and an area of 2,041,350 square miles. The total area of Europe is 3,800,000 square miles, so that Russia possesses more than half the whole territory of Europe, Russia in Asia or Siberia is about one-half larger than the whole territory of Europe, being in area 5,486,750 square miles. Russia in America (divided from Siberia by Behring's Straits) has an area of 391,000 square miles. This gives a total of 7,922,740 square miles of territory, exclusive of some recent additions to it. So vast an extent of country we may suppose must contain almost unlimited mineral resources, nearly the whole of the geological formations as found in

resources, nearly the whole of the geological formations as found in Britain being developed in Russia, and occupying large areas. In 1841 Sir R. Murchison undertook a geological survey of Russia in Europe, including the Ural Mountains. Since then a more intimate knowledge has been obtained of its mineral resources. The mate knowledge has been obtained of its mineral resources. The Silurian are the oldest stratified rocks; these are followed by the Devonian and the Carboniferous systems; on the latter rests the Permian system, so named from its extensive development in the province of Perm, in Russia. This is followed by the oolite, chalk, and tertiary strata of Western Europe. The Ural Mountains were until lately the main source of minerals. From this district gold to a large extent is obtained from washings. Mines exist here which furnish copper, zinc, iron, lead, silver, tin, platinum, and ironstone. Salt is manufactured largely, and is obtained from quarries of rock salt near lletzk, from salt lakes in the Crimea, Bessarabia, and Astrachan. and Astrachan.

e total production of Russian mines in 1871 is given from sta-

mines, while that of zinc is much larger. When we look at the item of coal, however, we view with astonishment the disparity in the quantities extracted in the year 1871; the quantity in that year in Britain being over 117,000,000 tons, against 817,008 tons in Russia. An explanation of this is to be found in the fact that wood is largely used in Russia as fuel, both for home and metallurgical purposes, but the requirements of railways, ironworks, and other manufac-tories are now beginning to make demands on the immense stores of coal and ironstone deposited in the Dominion.

rate of increase in the produce of coal and ironstone in Russia

The rate of the state of the st | 03 follows;— | Coal. | Ironstone | Coal. | Ironstone | 1840 ...Tons | 8,064 112,419 | 1868 ...Tons 444,067 651,422 | 1850 48,368 161,282 | 1870 697,267 788,502 | 1869 129,032 1870,088 | 1871 817,008 819,735 | The importation of coal into Russia has also been increasing dur-

ing the above periods, the importation from Britain in 1871 being 872,588 tons, and about a fourth of this from other countries. We thus see that with all its reputed wealth of coal fields the imported English and other coal exceeds the quantity raised in the country. We must investigate further as to the quality of Russian coals to obtain a solution of this seeming anomaly. The Russian people are either deficient in capital or enterprise to develope their coal deposit, or the coal is deficient in the high qualities possessed by many English and Welsh coals, for house, steam, coking, and gas

In European Russia there are four principal coal fields, besides

a few minor ones—

1. Coal Field on the Ural Chain.—This deposit extends along the flanks of the Ural Mountains, both on the west and east sides, of limited breadth, but extending along the length of the chain. Three seams are mentioned as being worked here, from 3 to 7 ft in thickness. The coal is composed of about 65 per cent. of carbon and 15 of ash. The total produce of this coal field is very limited.

THE COAL FIELD NEAR MOSCOW .- This is stated to extend 2. THE COAL FIELD NEAR MOSCOW.—This is stated to extend over an area of 12,000 square miles. Two seams of coal are mentioned, of 3½ ft. and 7 ft. in thickness. These are also impure coals, the average of 35 samples giving 18 per cent. of ash. The carbon is about 60 per cent. The coal field has apparently been subjected to great denudation, and in valleys still further, to within a short distance of the Old Red Sandstone formation, on which it rests, so that there is only a limited depth of deposits and but little covering on the seams. ing on the seams

3. THE COAL FIELD OF SOUTHERN RUSSIA.—This coal field is probably equal in area to the last named, but consists of a much greater depth of deposits, and several seams of coal 30 ft. in aggregate thickness. The coal seams are bituminous in one part and anthracitous in another part of this district; they are richer in carbon than those of the other districts mentioned above, and contains less ash, the seams being worked vary from 3½ to 5½ ft. in thickness. Both this and the coal field of Moscow belong to the THE COAL FIELD OF SOUTHERN RUSSIA.—This coal field is Scotland.

4. THE POLISH COAL FIELD is about 80 square miles in area, consisting of nine seams of coal, eight of which range from 3 to θ_d ft. in thickness, but the ninth has a thickness of about 20 ft. This series of coal are believed to be the true coal measures, and rest on the Silurian formation, the Carboniferous Limestone and Old Red Sandstone not being deposited. The coals here vary very much in The coals here vary very much in purity, some having a small admixture of ash and sulphur, others much more

Besides these four districts, there are deposits of coal in Turkestan, in the Caucasus, and in Siberia, of which little is known. That of Siberia is reported to be of very great extent, probably several coal fields, not at all developed, wanting capital and enterprise to make, probably, some great discoveries of mineral wealth.

The peculiarity of the Russian coal fields is their immense area,

the furnace-noise. It is repeculiarity of the Russian coal fields is their immense area, recharcoal), and with iron is fed into the furnace at the every two hours or so the molten metal (base bullion)

The slag is then cleaned

The peculiarity of the Russian coal fields is their immense area, the limited depth of deposits of each, and the small extent two which the ascertained coal fields are worked in proportion to their great extension. It is true that the supply of wood is plentiful, and is applied to the same purposes as it was in this country a century ago, but this supply must speedily fail as railways are extended and

fresh demands for fuel arise, both for locomotive and manufacturing purposes. The length of railway in use in Great Britain at the end of 1874 was 16,044 miles; that open in Russia was 10,900 miles on 44 railways. The latter with its extensive territory has yet reached but little more than half the railway development of Britain. Cold and sterile though a large proportion of the country be the railway must be the pioneer to open out its mineral wealth, making discoveries in its almost unexplored regions, and thus aiding the indusprosperity of the kingdom. If the natural resources of the were better developed its wealth would be increased, and ple more contented. There would then be less reason for its people more contented. them to covet the sunnier and brighter land of the Turks.

ECHOES FROM THE MINING MARKET.

ECHOES FROM THE MINING MARKET.

The warlike aspect of affairs upon the Continent, although it has seriously disturbed the quotations of foreign stocks and home railways, has not exercised any appreciable effect upon the mining market. Beyond a few changes in foreign shares, and a decline in East Van, prices have remained in a state of quietude, perfectly undisturbed by the rumours which have had such a powerful effect upon the other markets. As we have already stated in these columns, mines generally would have little to fear from an Eastern war, as there would arise an increased demand for metals, and consequently higher prices for ores. Should, on the other hand, war be finally averted at what now appears to be the eleventh hour, the relief to the public mind from the subsidence of the long debated and heartily hated "Question," would assist in lifting the incubus which has so long weighted down trade, and in clearing the way for better times. What is now wanted is simply that the "question" be finally settled one way or the other, for, as Turkey is reported to have stated in rejecting the Protocol, the present position of affairs is intolerable.

To turn, the market, we have to note a general hardening tendency in the

trade, and in clearing the way for better times. What is now wanted is simply that the "question" be finally settled one way or the other, for, as Turkey is reported to have stated in rejecting the Protocol, the present position of affairs is intolerable.

To turn to the market, we have to note a general hardening tendency in the prices of dividend lead shares, and a fair demand for those of the progressive class. Of the first-named, Great Laxey (cum div.), Roman Gravels, Leadhills (cum div.), Van (cum div.), and West Chiverton, have been in most request, although there have been some enquiries for both Lisburne and Minera, whilst of the progressive class, Rookhope, West Tankerville, and Derwent have been the favouries. Llannwest have advanced to 2, 2½, Aberdaunant are 10s. to 12s. 5d., Pennerley quiet at 11s. to 13s. and Tankerville at 8 to 8½, owing to postponement of dividend. The mine, is looking well. The 180, west of Watson's shaft, is worth 3 tons of lead per fitual and in five days over 30 tons of ore have been broken. Van Consols have been weak at 2 to 2½, although reports speak well as to the progress made in the development of the Van loole. A call of 28 per share has just been made in Frank Milis, It is hoped that with the new dressing appliances the mine will before long be worked at a profit. At Clementina the shaft produces 1 ton of lead per fathou, and the 25 end the same. The Glyn shaft is down a trifle over 18 fms. under the 28, and the lode is promising in appearance. The lead dressing apparatus is in a forward state. The winze below the 95 in Roman Gravels is worth 3 tons, and the 198 south 2 tons of lead per fathoum. The monthly sale at West Tankerville is estimated at 35 tons. The North Laxey necounts show a balance of assets over 18 fms. under the 25 end the same, and the 18 tons, and the

The colliery market has continued without alteration, and quotations in many cases are purely nominal.

In the foreign share market Richmond and Flagstaff have been offered, and the price of both show a decline. A fair demand has existed for Frontino, I.X.L., Exchequer, New Zealand Kapanga, and Eberhardt. Javail are weaker.

JAMES H. CROFTS.

THE WEEK.

THE WEEK.

SATURDAY, APRIL 7.—No relief arms to the operators for a rise, and many had to close at a larger loss than would have been made yesterday. Monday is the last day of the present account, and there does not now seem much chance of a raily. A good number of dealers are burdened withstock that they took up before the holidays, expecting the public would after Easter relieve them, but so far they do not show any disposition to do so. Russian of 1873 receded to \$455 (\$\frac{1}{2}\) worst. In Hungarian of 1871 there was a drop of 11., to 60. Altogether the foreign market was a very flat one. Railways also gave way all round, but the closing prices were above the worst. Caledonians, for instance, after being sold at 1234 touched 1225. North British fell \$\frac{5}{5}\), to 96. Central Illinois closed \$\frac{2}{1}\] lower-\$\frac{2}{4}\) is to \$\frac{2}{4}\). First here was a flat in at 2534. Fore-street Warehouse at 29: General Credit, 6 7-16ths; Hudson's Bay, 1334; and North Metropolitan Tramway, 174. Monday.—To-day at the finish Russians were no better than \$37\), one of the railway loans—Tamboff Kosloff—fell as much as \$\frac{6}{6}\). Railways were a flat market. Caledonian gave way to 122, and Great Western to 103. American securities had to be sold for less than yesterday. Eries fell to \$\frac{2}{6}\), and Central Illinois to \$\frac{2}{6}\). At lantic First Mortgage, \$\frac{2}{6}\) to \$\frac{2}{6}\, And Thorp's Gawber to 14. At lantic First Mortgage, \$\frac{2}{6}\) to \$\frac{2}{6}\, And Thorp's Gawber to 14. At lantic First Mortgage, \$\frac{2}{6}\, Caledonian was a sold on in mining shares. West Tankerville, Great Laxey, Sierra Buttes, and Exchequer were wanted. Wheal Crebor, 2 to 2½. Wheal Grenville, \$\frac{1}{6}\, to 17\frac{1}{6}\, Pateley Bridge, 2 to 2½. Richmond, \$\frac{3}{6}\, to 6\, to 2\frac{1}{6}\, to 14\frac{1}{6}\, to 14\frac

TRURBDAY.—Several operators for a fall being frightened into closing, Russian, 1873, opened considerably better than last night's prices. At 80½ a rather large business was done, but the rise was not long maintained, and finally the price was quite as low as yesterday. An ominous rise in saltperte was reported in the colonial markets. Railways were inclined to firmness, but a further drop in Consols checked them, and they closed dull. Great Eistern and Brighton, A, however, maintained the morning's improvement. In mining shares the chief leature was the fall in Flagstaff to 24, and in East Van to 6. Llanrwst, 2½ to 2½; Gold Run, 3½ to ½; A cerdaunant, 12s. to 14s.; North Laxey, 14s. to 16s.; Eberhardt, 8½ to 85; and Ged tr Creek, 10s. to 12s. 6d.

FEIDAY (Openny).—Russian of 1873 was fairly firm at the commencement at 78, but soon reseded; 16½, then recovered to 77½, 77½. Expytian, 1873, being 43½ to 49. Calcilonian, 119½ to 119½. Metropolitan District, 43 to 43½. Great Eastern, 49 to 40½. The somewhat conflicting reports from abroad are interpreted according to the wishes of rival operators who are engaged in a keen struggle for the mastery, prices being bandled about a good deal in consequence. Flagstaff, 2½ to 2½; Richmond, 5½ to 5½; Eberhardt, 8½ to ½; Parys Mountain, 7s. 6d. to 8s. 6d.; Llaurwst, 2½ to 2½; Aberdamant, 3½ to 8½; Parys Mountain, 7s. 6d. to 8s. 6d.; Llaurwst, 2½ to 2½; Aberdamant, 3½ to 8½; Brimingham, 147½ to 147½ is 105%, and Egyptian Unified, 35½ to 36. Railways are fairly steady, but there is only a small business doing. Midland, 127 to 127½, Birmingham, 147½ to 147½ to 116; Great Eastern, 40½ to 10½; British 33½ to 33; Great Testern, 10½ to 10½; Brimingham, 147½ to 147½ to 103; Midland, 127 to 127½, and Nungarians are somewhat better, but Consols are weaker. Great Eastern, 40½ to 40½; British 93½ to 303%; Great Western, 101½ to 10½; British 93½ to 137. Great Eastern, 40½ to 40½. Cardiff and Swanssa are quoted 13½ to 2; Chappi House, 3 to 3½; Fleeby Bridge, 2 to 2½. Birchin lane, 4ppi 13.

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—S. Toy, April 11: The men that are cutting down the new haft have ûnished their contract to the back of the deep adit level; I have now them to square it to the bottom of the level, also to cut a plat 8 ft. long, 7 ft. dide, and 1 ft. high, and to cut a gutter round the shaft to take up all the top tater before we begin to sink the shaft below the level. In the east part of the ti (Crowlwm) in the cross cut driving towards the new lode we have made no each discovery during the past week.

ASSHETON.—John Craze, Joel Manley, April 12: In the 50, east of Mawr shaft, Fving south on the north and south lode, the lode is improved a little for lead ore

fresh discovery in the cross cut driving towards the new lode we have made no ASSHETON.—John Craze, Joe Manley, April 12: In the 50, east of Mawr shaft, friving south on the north and south lode, the lode is improved a little for lead ore since our last, and presents a promising appearance for a further improvement; we are pushing on this drivage with the utmost dispatch. No change in any other part of the mine. We shall send out samples for the sale of 30 tons of lead to morrow (the 13th), for sale on the 21st inst.

BELSTONE.—James Neill, April 7: A Shaft: The 80 west, on lode, has been lriven 4 ft.; total distance from cross cut south, 5 fms. 4 ft. 6 in. A cross-course has been intersected, which is very portus, and discharging a great quantity of sater; it is highly mineralised, the strata being composed of garnet quantiz and shlorite, interspersed with copper ore and arsenical mundio. The 80 cross-cut south, from the eastern drivage, has been driven 6 ft. 6 in.; total distance driven, 1fm. 2 ft. 6 in. The stratum is very promising indeed, and favourable for working, being chiefly composed of garnet quartz, horablende, and a great deal of shlorite; intermixed with the latter are stones of arsenical mundio and yellow ore. It is believed these favourable indications will very soon lead to more productive ground.—C Shaft: In the stope in bottom of the 40 the north part of the lode still fields very well indeed; there is no change in the strata since my last report. The tope in back and side of this level (centre of lode) is not so productive. On Monlay next the men will be removed from here to the stope in back of the 45, which is at present looking very well, jielding good black and yellow ore.

BUE HILLS.—8. Benaetts, A. Gripe, April 7: The north section of the lode, so at present looking very well, jielding good black and yellow ore.

BUE HILLS.—8. Benaetts, A. Gripe, April 7: The north section of the lode, but not yet been cut in the rive above the 80; the ground, however, is secoming much easier, and the

of much the same character as last reported, the ground continuing very favourable. We have resumed the driving of the cross cut north towards another lode, which is about 4 fms. further north—Tregometris: The lote in the adit end west is still rather disordered, but occasionally produces good stones of tin. In the shaft sinking below the adit the lode continues to look very well, being worth 12?, per fathom for length of shaft (10 feet).

ESGAIR-FFRAITH—T, Glanville, April 7: In accordance with my expectations the water was pumped from the eastern shaft on Friday morning, which enabled me to go underground and examine the lode at the deepest noint explored—the 10, below adit. I can confinently state without the slightest exaggration that this is the most gigantic lode it has ever been my fortune to see. The levels driven east and west of the shaft are on one part of the lode composed of carbonate of lime, a very special gossan, and in places stones of very rich copper ore, and when a deeper point is attained to have no doubt we shall strike into an immense body of copper and lead ores. On Monday I shall place men to cross cut through the lode both cast and west of shaft, in order to fully see its size and elatracter, and also to make preparations for sinking the shaft below the 10 fathom level; this and the foregoing operations will I feel confident open up a very rich mine.

— April 12: Eastern Shaft: We have commenced to cross-cut the south part of the the lode in the 10 fathom level; this fath the lode in the 10 fathom level; shaft who was a summary of the south part of the the lode in the 10 fathom level; this shaft below the levels, and by Monday shall be fully prepared to commence sinking this shaft below the levels, and by Monday shall be fully prepared to commence sinking this shaft below the level with a full pare of men. This should be pushed forward with every possible dispatch to see the lode at a deeper point below the large body of gossan.

ESGAIR HIR.—T. Glanville, April 7: We have laid the rail

done this we shall commence to fork the water from the bottom of the mine, in order to begin operations on the lead still standing there.

— April 12: We are making rapid progress in clearing the adit; we have six men tramming.

FRANK MLLIS.—James Rowe, N. Addems, April 11: Setting Report: The 115 to clear north of engine shaft, on the east part of east lode, by four men; we have about 10 fms. to clear to enable us to drive the cross-cut west to get under the wince sinking in the bottom of the 100 north. The 100 to drive north of engine shaft, on the east lode, by six men, at 42. 19s. per fathom; the lode is producing 13 evts. of lead ore per fathom. No. 1 stope, in back of the level, by four men, at 22. 2s. per fathom; the lode is producing 12 evts. of lead ore per fathom. No. 2 stope, by two men, at 14. 15s. per fathom; the lode is producing 12 evts. of lead ore per fathom. No. 2 stope, by two men, at 14. 15s. per fathom; the lode is producing 2 evts. of lead ore per fathom. No. 3 stope, by four men, at 14. 15s. per fathom; the lode is producing 8 evts. of lead ore per fathom. No. 4 stope, by six men, at 14. 15s. per fathom; the lode is producing 8 evts. of lead ore per fathom. We have started a cross cut in the lode, north of engine-shaft, on the west lode, to intersect the east lode. We expect to meet with this lode in about 6 fms. The stope in back of the 84, north of engine-shaft, on east lode, by four men, at 14. 1s. per fathom; the lode is producing 7 evts. of lead ore per fm. The 72 to drive north of cross-cut, west of boundary rise, on west lode, by two men, at 6. per fathom; the lode is producing 7 evts. of lead ore per fm. The 72 to drive north of cross-cut, west of boundary rise, on west lode, by two men, at 6. per fathom; the lode is composed of spathosa iron ore, and producing a little lead. The stope in back of this level by two men, at 22. les, per fathom; the lode is producing 7 evts, of lead ore per fathom. The obundary rise, by four men, at 14. Per fathom. The first in back of the 80, north

sition of the lode. We have completed the reservoir, and all halve with the lead dressing apparatus.

SEDD AND MERLLYN CONSOLS.—April 12: The inline is looking is well as last reported. We sold at to-day's ticketing 50 tons of lead ore, at s. 6d. per ton. The reduction in price is caused by a fall in the standard, at the standard of the west of the standard of the

c. 60, and prove whether this end is on the main part of the lode. The lode in the fig. west of shaft, is 4 ft. wide, and worth 4 tons of ore per fathom. The lode in the fig. it is in the back of the 6 it is worth 3 tons of ore per fathom. This rise have a point of the main part of the lode. The lode in the fig. is in the back of the 75, west of the skip shaft, is long as per fathom. The rise in the back of the 75, west of the skip shaft, is still some of ore per fathom. The winze in the bottom of the 75 is worth 3 tons of ore per fathom. The lode in the 86 fm. level, west of the shift, is still some of ore per fathom. The lode in the 85 fm. level, west of the shift, is still some of ore per fathom. In Gundry's shaft we have met with a hard floor of 6 tons, who ravy, as we met with no ground like it in driving our cross-cuts south 10 tons; ravy, as we met with no ground like it in driving our cross-cuts south 10 tons; ravy, as we met with no ground like it in driving our cross-cuts south 10 tons; ravy, as we met with no ground like it in driving our cross-cuts south 10 tons of ore per fathom. The rise in the back of this level is worth 42 tons of ore per fathom. The rise in the back of this level is worth 42 tons of ore per fathom. The rise in the back of this level is worth 42 tons of ore per fathom. The rise in the back of this level is worth 42 tons of ore per fathom. The rise in the back of this level is worth 42 tons of ore per fathom. The rise in the back of this level is worth 42 tons of ore per fathom. The rise in the back of this level is worth 42 tons of ore per fathom. The rise in the back of this level is worth 42 tons of ore per fathom. The rise in the back of this level is worth 42 tons of ore per fathom. The rise in the back of this level is worth 42 tons of ore per fathom. The rise in the back of this level is worth 42 tons of the rise in the back of this level is worth 42 tons of the rise in the back of the rise in the back of the level is worth 42 tons of the rise in the back of the rise in th

ide of level, the one on the north carries a little ore; I am we branches come together we shall have a good improveme b two men, at 140s, per fathom, and pay all cost as usual, the ore in winze has improved a little since my last, we are he eastern end of same in order to sink it in the best part, herefrom as we can; this bargain is not yet set. The second usily engaged in dressing their ore. We have 6 tons of ore ampled same, for sale on the 24th instant. All the machine in good order.

in good order.

OLD TREBURGETT.—W. Hancock, W. T. Bryant, April 12: In the we continue to drive on the east part of the lode. In the 99 south we have continue to drive on the east part of the lode, it appears to be very lar as seen, it is worth about 10t, per fathom. No. 2 winze, under the level, T. per fathom. Stopes in the back of the 89 are much the same at o stated in our last setting report. In driving on the west part of lode stope it still continues worth about 7t, per fathom. No 4 winze has b 3ft. deeper, but cannot go down any further until the water is cut so worth about 10t, per fathom. The men ore put in the 99 to help strip west part of the lode. In the 80 cross-cut west we have passed through the part of the lode. In the 80 cross-cut west we have passed through the part of the lode. In the 80 cross-cut west we have passed through the part of the lode. In the 80 cross-cut west we have passed through the 10 the 70 cross-cut east. Massey's shaft is divided and cased the 41: and we have commenced to draw away the accumulated alread tributers' stuff, as well as cut plat, and hope to commence stating the 10 time next week, as well as driving the 40. We soid to day two parcel No. 1, 25 tons, at 24', 5s.; and No. 2, 5 tons, at 18', 18's. 6d.

PARYS MOUNTAIN.—T. Mitchell, April 12: We have no change her of notice since my last. The improvement which took place in some stoping points hast week is still maintained.

PATELEY BRIDOES.—C. Williams, April 12: I have no material clap port upon this week in any of the underground bargains, with the exempt 30 cast, on the Rake veh; we have just cut into the first bed, which has productive in the 20, and I have no doubt we shall find it equally as it present depth. I shall be able to furnish you with better account in my lind some little difficulty to open out on Lumb veln, owing to the softing ground and the great raish of water coming out of it. Simething ore favourably.

PEDN AN-DREA CONSOLIDATED.—W. Tregay, April 11: There is

vourably. PEDN-AN-DREA CONSOLIDATED.-W. Tregay, April 11: The:

In the 150 west, on the south part of the iode, the bote is 6 ft, wide, and worth 1 tons of one, or 20, per fathorn. In the 190 east, the lode is 5 ft, wide, and worth 1 tons of one, or 20, per fathorn. In the 190 east, the lode is 5 ft, wide, and worth 10 cast, the part of the lode earned, 5 it, wide, is worth fully 8 tons, or 30%, per fathorn. The 190 cast, wide, is worth fully 8 tons, or 30%, per fathorn. The 190 cast, which placed the part of the lode is 8 this ago of course where west of such, so the sold earned, 5 it, wide, and worth 10 cast, the lode is 8 this ago of course where west of such, so the lode is 8 this ago of course where west of such, so the lode is 8 this ago of course where west of such as a su

APRIL

| seek, south of the winze, by four men, at 6i. per fathom, worth 2 tons per fathom, 160. 2 stope, south of ditto, by four men, at 6i. per fathom, worth 2 tons per fathom, 50. 2 stope, south of ditto, by four men, at 6i. per fathom, worth 2 tons per fathom, 50. 2 stope, south of 2 tons of lead ore, for sale next Thursday.

ST. PATRICE. Wim. Francis, April 11: The cross-course in the 129 yard level orest cut sorth is 2 ft. wide, with congenial compounds and firm walls, the process cut sorth is 2 ft. wide, with congenial compounds and firm walls, the process cut satisfactory. I am in constant hope of cutting into a good vein residency exists of the constant of the constant

set being very status level cross-cut, in the chert measures, is also very prolead ors. The old party beds and speedy ground.

SOUTH ALE AND CAKES,—John Mayne, April 12: The lode in the eastern SOUTH ALE AND CAKES,—John Mayne, April 12: The lode in the eastern should be shown that the same shat week, and the same remark applies of the loss of the loss

against with carbonate of lime and lead ore, and worth for the latter about its per fathom.

Is per fathom.

As RERVILLE.—A. Waters, April 12: Setting Report; Watson's shaft to ARKERVILLE.—A. Waters, April 12: Setting Report; Watson's shaft, to the lead of the lead ore per final mission of the lead ore per fathom. No. 1 stope, in the back of the said level, by four men, at 64. 10s per fathom. No. 1 stope, in the back of the said level, by four men, at 64. 10s per fathom. No. 3 stope, by four men, at 64. 10s per fathom, worth 1 stope fathom. No. 3 stope, by four men, at 64. 10s per fathom, worth 1 stope fathom. No. 3 stope, by four men, at 64. 10s per fathom, worth 1 for 1 or drive east of shaft, by six men, at 64. 10s per fathom, worth 2 stope high lead ore. The same level to drive west of shaft, by six men, at 144. per fathom; lode wide, yielding good stones of lead ore. The same level to drive west of shaft, by six men, at 66. 10s, per fathom, worth 3 tons fathom. The 2 stope, by four men, at 64. 10s, per fathom, worth 3 tons fathom. No. 2 stope, by four men, at 64. 10s, per fathom, worth 3 tons per fom. No. 3 stope, by six men, at 64. 10s, per fathom, worth 3 tons per fom. No. 3 stope, by six men, at 64. 10s, per fathom, worth 3 tons per fom. No. 3 stope, by six men, at 64. 10s, per fathom, worth 3 tons per fom. No. 3 stope, by six men, at 64. 10s, per fathom, worth 3 tons per fom. No. 3 stope, by six men, at 64. 10s, per fathom, worth 3 tons per fom. No. 3 stope, by six men, at 64. 10s, per fathom, worth 3 tons per fom. 10s cross the fathom of Tankerville lode towards the side lodes, by four men, at 13c, per fathom. To rise and stope in the 13c, west of shaft, on the hidde, by four men, at 84. per fathom; at 62. 10s, per fathom, worth 1 ton per men, at 64. 10s, per fathom, worth 1 ton per men, at 64. 10s, per fathom; lode worth 2 tons per fathom; lode by four men, at 64. 10s, per fathom; lode worth 1 ton per fathom. No. 2 south lode, by four men, at 64. 10s, per fathom; lode worth 1 ton per fathom. The stop fathom. 2VILLE.-A. Waters, April 12: Setting Report: Watson's shaft to

that authered by four men, at 0. 10s. per fathom; we lode in about 3 fath) ms. No. 1 stope in back of adit our men, at 22. 10s. per fathom; lode producing 20 tons . 2 stope by two men, at 22. 10s. per fathom; lode pro-cr fathom.

J. Gifford, April 11: The cross-cut at the 30, north of

With the present progress we shall soon be in a position to cross at the 50. Water percolates freely from the south part of the lode midiation of its being charged with lead. In cutting plat, preparatory inze under 40 west, we find lead; therefore, I think our chance of spoint very great. The stope above the 40, west of winze, is at preng 25 to 30 cwts. of lead per fathom. The 40, east of Gundry's, or lo le, contains lead. All the machinery on the mine is in good order ing its work well.

clead. All the machinery on the mine is in good order, rell.

—E. Williamson, April 11: The tongue of the percushe camps; such had split between two of the bolt holes, greenheart-table jumping. We have put on two from the spring behind seems to do its work pretty lid down spring, only the pressure-bar which you had old cut in the 5 fm. level this afternoon, and plenty of e are, I am sure, on the verge of something rich and time to finish the report yesterday; it was about two fore the last assay was ready to be made. I am sure ressed over the result, will be better than I have stated.

ittle more water than it has done lately. The stope in back of this level is set to fear men, at 37. 3s. per fathom; the lode for 8 or 10 fms. long is worth 107. per fm. So other change calling for remark in any other part of the mine. We shall sample by the solid control of the sample of the sa

16f. per fathom for lead ore. A stope by four men, in back of level west of crosscut, worth 16f. per fathom for lead ors. Two men to drive east upon No. 3 vein, at 6f. per fathom; lode 2 ft. wide, yielding 6 cwts of lead ore per fathom. We shall have 30 tons of lead ore per fathom. We shall have 30 tons of lead ore at the smelting mill on Saturday next.

WEST GODOLPHIN.—John Pope, April 11: I calculate the 60 will be drained of water to-day against 2 o'clock, P.M. There is no cleange in the mine worthy of remark since my last report. We are pushing on raising stones and getting out the foundation for the engine house as fast as possible.

WEST MARIA AND FORTESCUE CONSOLS.—W. Skewis, April 11: Last week we put the boring machine to drive the eastern end at the 71, alternately

the foundation for the engine house as fast as possible.

WEST MARIA AND FORTESCUE CONSOIS.—W. Skewis, April 11: Last week we put the boring machine to drive the eastern end at the 71, alternately with the western end, so as to keep it continually at work whilst the holes are being blasted, stuff cleared, &c., and are glad to say it continues to work with great success. In the eastern end we have a kindly lode, 27t. wide, producing sopper and mundie. The lode in the western end is still disordered. The stopes and pitches throughout mine are without alternation.

WEST TANKERVILLE.—A. Waters, April 12: Setting Report: The boundary shaft to sink below the 75, by nine men, at 20t. per fathom. To 75 to drive south of shaft, by six men, at 13t. 10s. per fathom, worth 16t. per fathom. The stope in the roof of said level, by wo men, at 5t. 10s. per fathom, worth 10t per fathom. The 3t od drive south of shaft, by two men, at 7t. per fathom, to 10 per fathom. The 63 to drive south of shaft, by two men, at 7t. per fathom, at 4t. per fathom, worth 16 cwts. per fathom. No. 2 stope in ditto, by four men, at 4t. per fathom, worth 16 to the per fathom. No. 2 stope by four men, at 4t. per fathom, worth 16 to per fathom. No. 2 stope, by four men, at 4t. 10s. per fathom. No. 1 stope, in the 50 south, by two men, at 4t. 10s. per fathom. Stope in the 50 south, by two men, at 4t. 10s. per fathom; lode worth 12t. per fathom for lead and blemie. We have to day sold 35 tons of lead ore for 44d. 12s. 6d.
WEST TRESAVEAN.—Goo. Stephens, April 10: Since my last report we have drawn a large quantity of tinstiff to surface, and are now in a position to break large quantities of good work for tin. All the other operations are being pushed on with aped.

speed.
T WHEAL TOLGUS.—April 11: In Taylor's shaft the ground is much the

large quantities of good work for tin. All the other operations are being pushed on with speed.

WEST WHEAL TOLGUS.—April 11: In Taylor's shaft the ground is much the same as is ast reported—the right sort of killas for ore. The lode is the 135 end eats is 2 ft. wide, with a little ore: a kindly lode, and the end dry. The lode in the 135 end west is not quite so good as last reported, yielding 6 tons of ore per fm: the south part on which the end is being driven the men will now commence taking down the north part, which we think will yield some good ore. The stopes in the side and back of the 135 are yielding very well, quite up to the former reports. The lode in No. 4 winze under the 125 is 7 ft. wide, yielding 8 tons of ore per fm: the winze is down 7 fms., and the lode improving all the way down. The 135 end is about 2½ fms. behind the winze, so we are sure of its continuance further yet. The lode in the rise in the back of the 125 west is small, yielding a little saving work; we hope to communicate this rise with the 115 about the end of the month, we shall then have plenty of air for driving the 125 end, and for sinking another winze under this level. There is no alteration to notice in the western part of the mine. Richards' shaftmen will be employed all the month in cutting plat in the 95, putting in casings, and dividing the staft below the 85. We have nearly finished dressing the ores for next Tuesday's sampling; we shall be ready in good time with about 240 or 250 tons—the usual quantity for the first month.

WHEAL CREBOR.—J. Andrews, April 10: In the 120 east no lode has been taken down for the week. The lode in the 108 east is large, but the south part of it is poor; we are, therefore, carrying only 2 ft. of the north part, which is worth 6. Per fathom. The lode in the 108 continues of the same value as last reported—200, per fathom. In sinking the winze below the 108 our progress during the east fortnight has been slow, owing to tight ground, quick water, and bad air; the winze is now down 11 fms.

same to-morrow. We have about 71t. of water in the 189, and at the north shaft the water is about 4 ft. above the 130. Our forking is very slow indeed. However, our stumps is now going all the time, and I hope to sell a good parcel of the atour usual time.

WHEAL KITTY (St. Agnes),—S. Davey, Rich. Harris, April 7: New Shaft—Pryor's Shatt: In this shaft sinking below the 154 the ground is composed of clay-slate, interspersed with small branches, carrying a little flookan; this we consider a good indication for the production of mineral. The lode in the 154, east and weat, is producing saving work for the stamps. The 154, driving west of shaft, on the branch, is poor. The lode in the 142, driving east of shaft, is 2/5 ft. wide, and worth for 77. per fathom. The lode in the 142, driving west of shaft, is 6/5, the wide, and worth for tin 9/5, per fathom. The lode in the 130, driving west of shaft, is 2/5 ft. wide, and worth for tin 70. per fathom. The lode in the 154, driving west of shaft, is 2/5 ft. wide, and worth for tin 70. per fathom. The lode in the 154, driving west of shaft, is 12/5 ft. wide, and worth for tin 70. per fathom. The lode in the 150, driving west of shaft, is 12/5 ft. wide, and worth for tin 70. per fathom. The lode in the 150, driving west of shaft, is 12/5 ft. wide, and worth for tin 70. per fathom. The lode in the 150, driving west of engine-shaft, is 2/5 ft. wide, and worth for tin 71. per fathom. In the 90, driving east of engine-shaft, is 2/5 ft. wide, and worth for tin 71. per fathom. In the 90, driving east of engine-shaft, is 2/5 ft. wide, and worth for tin 71. per fathom. In the 90, driving east of engine-shaft, is 2/5 ft. wide, and worth for tin 71. per fathom. In the 90, driving east of engine-shaft, is 2/5 ft. wide, and worth for tin 71. per fathom. In the 90, driving east of engine-shaft, on the silver lode, by six men, at 72. per fathom; the lode in the engine-shaft, on the silver lode, by six men, at 73. per fathom; the lode in the engine-shaft, on the silver lode, by four men

opening up well.

WHEAL UNY.—W. Rich, Matthew Rogers, Joseph Rich, April 9 : The rise in the back of the 160 west is worth 6, per fathom. The 160 east yields stones of tin. the back of the 160 west is worth 6l. per fathom. The 160 east yields stones of tin. Th rise in the back of the 150, towards King's shaft, is worth 7l. per fathom. The 140 end east is worth 1l. per fathom. The 130 east is worth 1l. per fathom. The rise in the 60 west is worth 1l. per fathom.

FOREIGN MINES.

FOREIGN MINES.

SAN PEDRO.—W. Phillips, Feb. 28: In the 185 the shaft is now down 4 metros below this level, which is sufficient for the fork. The cross-cut in this level has been driven during the month 2 metros; the ground is still very hard for driving. We have now six men in this cross-cut, at 83 p-er metro, and it will be pushed on with all possible speed. In a few days we shall put down the skip-road and ladder-way from the 150 to the bottom. That being done we shall be able to work more conveniently, and with less expense, as we shall be able to do without the tackle men. In the 150 the cross-cut driving towards the Manto V. ed., at 820 per metro, is without change; the ground is still hard. The tribute pitch in the 47, by the side of the old works, is still leaving a small profit, and we have two men breaking out small quantities of 29 per cent. ore by the side of the old works, is still leaving a small profit. Works in other parts of the mine are suspended.—Santa Elena; The end driving on the main lade, by two men. at 814 per metro. Is without change since last report, still emain lade, by two men.

the 65, driving in the same direction, the lode is small and poor, and the granite very hard for driving. The 105, east of Peillis, is open and promising, but not so valuable as it was: present value 1 ton per fathom. The 90, east of 8an Francisco shaft, is compact and regular, and also worth 1 ton of ore per fathom. The 75, east of this shaft, continues unproductive. The 65, east of 8an Francisco's shaft, is without improvement. The men are getting on well with the sinking of Peill's engine-shaft below the 105. Good progress is being made also in sinking 8anto Thomas shaft below the 120. The lode in No. 216 winze is regular, and yields 1 ton of ore per fathom. No. 217, below the 55, is without change, still valued at 1 ton per fathom. In No. 218 winze the lode is large, and also yields 1 ton of ore per fathom. The rate of raising was well maintained in the past month, and there is no alteration of importance in the value of the stopes at present. The work at surface is geing on very regularly, and the machinery is in good working order. We estimate the raisings for April at 290 tons.

Quinientos Mine: In the cross-cut at the 100, west of Taylor's shaft, there is no change to report. The 60, west of Taylor's shaft, is easy for driving, but without ore. In the 80, west of this shaft, the lode continues without improvement The lode in the 90, east of 3adder's shaft, is very wide, and much easier for driving than it was. In the 80, east of addis's shaft, the lode is very changeable, and a present a little better than it. was a few days since: valued at 1/2 ton per fathom. The 65 is without ore. The lode in the 65, west of San Carlos shaft, is much harder than it was. The 80, driving in the same direction, continues unproductive. The same level east is being lengthened at a good rate, but the lode is of no value. In the 65, east of Jadde's shaft, the lode is small and poor, and the ground hard for driving. The 45 continues without change. No lode or branch hard for driving. The 45 continues without change. No lode

PESTARENA.—April 7: District of Val Toppa: In the end in the western p of the great quartz lode south in Zero level the lode is at present very small, wi stones of ore. In the winze behind this sod the lode is producing 8 tons per fur worth 12 dwts, per ton. At the intermediate level below Zero in the end south the mountain the lode is divided into two parts, and is of no value at or sent. To lode in the end northward is small, with stones of ore. The stope in the botto south is yielding now 12 tons of ore per fathom: worth about 12 dwts, per ton. No. 2 Level: Stope No. 1 in the back south of first cross cut west is produced from the product of the product o ended.
The incline shaft is being sunk by twelve or

this month.

ALAMILLOS.—April 4: The lode in the 60, west of San Francisco shaft duces good stones of ore in the bottom of the end. In the shaft, the lode is large and strong, and spotted with ore, same direction, does not contain any ore to value. The 20, was for driving, and yields & ton of ore per fathom. The

one in the 25, west of Swaffield's, is compact, and is opening fairly pround, worth 1 ton per fathom. The same level east is poor. The 45, his shaft, is still in disordered ground. The 55, west of Palgrave's, yieldere per fathom. The lode in the 65, west of the same shaft, continues ple ground is hard for driving through. In the same level east the lot tons of ore per fathom. The 55, cast of Palgrave's, has passed through are of ground, and is now opening ore ground worth 15 ton per fathom xing cf the pitwork in Palgrave's shaft has been completed, and sinking essumed under the 55 fm. level. The sinking of San Miguel shaft below one on well. Excellent progress is being made in sinking Swaffield's shaft 64. Alvarez' winze, below the 120, is poor.

LANESTO3A, —April 6: Matienzo: The lode in the 50 metre level, suillerme shaft, has varied since last report, frequently showing a goal in

[For remainder of Foreign Mines, see to-day's Supplement.]

MANUFACTURE OF ASPHALTUM.—The essential property of the asphalte made according to the invention of Mr. E. Rocheman, of Cairo, is its power of entirely resisting solar heat without experiencing any depression in consequence of the softening of the material under the solar influence. Trials have also shown that it re-Cairo, is its power of entirely resisting solar heat without experiencing any depression in consequence of the softening of the material under the solar influence. Trials have also shown that it resists the action of cold, and that it does not experience under the influence of frost any contractions resulting in fissures in the mass. It is to give the ashpalte this property of resisting solar rays that Mr. Rocheman proposes to take as the base of his manufacture a particular clay called in geology fossil clay, and which is found in abundance in the old alluvial earths of Egypt. This clay is, therefore, the chief feature in his manufacture, it is to it the stability of his products is due, and also the hardness which they offer to the trampling of men and animals, as well as to the pressure and friction of vehicles, but in the manufacture of this asphalts clays of another kind, possessing of themselves the qualities of the fossil clays which are found in Egypt, or which are brought by different means to that state, are capable of producing the same results. In the process of manufacture the first operation consists in carefully grinding the clay either by hand or by suitable mechinery until it is reduced to a state of impalpable powder in sifting it in order to remove foreign matters which may have got mixed with it, and in again reducing it. In this state it is necessary to be assured that it is as dry as possible, and if it is not in this essential condition the drying must be effected by any suitable processes which are prompt and economical: the clay is then ready for manuswhich are prompt and economical: the clay is then ready for manuswhich are prompt and economical: the clay is then ready for manuswhich are prompt and economical: the clay is then ready for manuswhich are prompt and economical: the clay is then ready for manuswhich are prompt and economical: the clay is then ready for manuswhich are prompt and economical: the clay is then ready for manuswhich are prompt and economical: facture. As to substitutes for the Egyptian clay, he avoids especially saliferous clays, but for the most part, under the conditions herein before explained, clays of all kinds can be advantageously employed when they are purified and carefully dried. Clays he says are in a chemical point of view, hydrated or hydratiferated aluminous, silic-ter, sometimes mixed with more or less pure quartzy sand, on account of their origin, which connects them with the destruction of different kinds of rocks. These clays purified will quite answer the purpose. It follows, then, from this essent al consideration that the more or less fine or more or less pure clays generally employed in the manufacture of bricks, and of fine or coarse pottery, pipes, crockery, and porcelain, are excellent materials for the manufacture of the asphalte; also all debris of bricks, pottery, crockery, and procelain, broken and pulverised. All these materials, the base of which is c'ay, have the property of absorbing bituminous matters, and of forming therewith compact and resisting mixtures, having properties such that they produce asphaltes of very good quality, and capable of being applied for various purposes.

* .* With this week's Journal a SUPPLEMENTAL SHEET is given with this week's Journal a SUPPLEMENTAL SHEET is given, which contains: Original Correspondence: Commerce in the Superior Metals for the First Quarter of 1877; Australian Gold Companies (T. Dicker); Rock Roving Machinery (R. Sauders); Northamptonshire Iron Ore (B. W. Hart); Lanzi Mines, and New Patent Dry Ore Concentrator; Mining in Newfoundland; Roman Gravels; Capt. Tregay, and Pedn-an-drea Mines (W. Tregay). Parys Mountain Mines; New Consols Mines (E. Skewis); Bedford United Mines (T. B. Laws); Cardiganshire Mines—A.D. 1877—No. XI. (A Francis); Water Wheels; the So called Barnard Process; the Mineral Resources of Canada—Registration of New Companies; the Scotch Mining Share market —Foreign Mining and Metallurgy—Australfan Mines—Foreign Mines—Lanzi (Tuscany) Lead Mines—Special Report—Machiner .. Hand Labour in Mining—Patent Matters—Meetings of West Mostyn, Linares, Alamillos, Fortuna, New Consols, Great Laxey, North Laxey, and Dolcoath Companies, &c.

TO THE METAL TRADE.

FOR COPPER, TIN, LEAD, &c., apply to-MESSRS. PELLY, BOYLE, AND CO., SWORN METAL BROKERS, ALLHALLOWS CHAMBERS, LOMBARD STREET, LONDON. (ESTABLISHED 1849.)

The Mining Blarket: Prices of Metals, Ores, &c.

Δ	IETAL	MARKET-LONDON, APRI	L 13,	187	7.
IRON. & s. d.		TIN. £ s English, ingot, f.o.b 74			8. d
Pig, GMB, f.o.b., Clyde., 2 14 0-	3 5 6	bars , 75	0 0-	_	
Bars, Welsh, f.o.b. Wales 5 15 0-	8 0 0	refined 77	0 0-	_	
in London, 6 7 6-	6 10 0	Australian 69 1	0 0-	-	
, in London, 6 7 6-	8 15 0	Banca 71	0 0-	71 1	0 0
in Type or Tees 6 26-	6 5 0	Straits 69 1	5)-	-	
Swelish, London 10 0 0-1	0 10 0	COPPER.			
Rails, Welsh, at works 4 15 0-	5 0 0	Tough cake and ingot. 77	0 0-	78	0 0
Railway chairs		Best selected 78	0 0-	-	
,, spikes	-	Sheets and sheathing. 81 1	0 0-	83	0 0
Sheets, Staff., in London 9 0 0-	9 5 0	F at Bottoms 84	0 0-	85	0 0
Plates, ship , in London 7 10 0-	0 15 0	Wallaroo 77	0 0-	1986	
Hoops, Staff 7 15 0-	8 10 0	Burra, or P.C.C 76	0 0-	-	
Nail rods, Staff. in Lon. 7 10 0-	1 15 0	Other brands 76	0 0-	-	
STEEL.		Chili bars, g.o.b 70	0 0-	70	5 0
English, spring 14 0 0-2	3 0 0	PHOSPHOR BRONZE.			
, cast 25 0 0-4	15 0 0	Bearing metal		12 0	0
Swedish, keg17 0 0-		Other alloys £120 0	0- 14	40 0	0
,, fag. ham17 10 0-1	18 10 0				
LEAD.		Wire	9163	01/	a
English, pig, common 20 12 6-2	20 15 0	Tubes	01/20	072	CL.
" L.B. nom.21 0 0-	-	Sheets			_
, W.B21 10 0-	-				
,, sheet and bar21 15 0-	-	Yel. met. sheath. & sheets.			
,, pipe22 0 0-	-	Nails composition	81/4	- 93	4
red	8 0 0	TIN-PLATES.*	per bo	ox.	
makama ahaa 04 10 0	0 0	Charcoal, 1st quality 1			2 6
Spanish2) 7 6-	_	,, 2nd quality 1	1 0-	î	1 6
	_	Coke, 1st quality 0 1	9 4-	-	
QUICKSILVER.		2nd quality 0 1	8 6-	Transaction.	
Flasks of 75 lbs., ware. 7 5 0-	_	Black por ton 16	0 0-	16 1	0 0
SPELTER.		Canada, Staff. or Gla., 112	0 0-		
Usefan or Rhenish 20 10 0. 2	0 15 0	at Liverpool	00-	19	UU

REMARKS .- With the exception of short intervals with slight variations our markets since the autumn have continued to droop, and at no time has there appeared any positive indications of the downward tendency being arrested, or the prospect of a settled im-

and at no time has there appeared any positive indications of the downward tendency being arrested, or the prospect of a settled improvement in the demand. Although in the ordinary course of business orders invariably increase at the year developes, yet such is the extraordinary-state of the times through which we are now passing that instead of a better trade there is not even the symptom of the least promising change; but on the centrary, a very uneasy and apprehensive feeling in regard to the future, and bad as trade has been, and undoubtedly continue to be, it is still thought by many that matters may become worse before they are better, and in the present uncertain state of political, as well as commercial, affairs it does not seem at all unlikely that this may be the case, and it, therefore, behaves every one to be most guarded in their operations, and on no account to accept risks of a doubtful character, or to enter into engagements beyond their own resources, otherwise the result may be far from satisfac ory. It is better, in fact, to err on the side, of caution and do nothing for awhile, than to be doing badly and incurring losses, and thereby rendered powerless when a favorable opportunity does present itself for action.

For some time past we have repeatedly urged upon one and all to adopt a caurious policy as the most discrete and safest course to pursue at such a perilons period as the present, and not to be encumbered with heavy responsibilities, and it is satisfactory to know that many have acted upon our recommendations, and have now every reason to congratulate themselves upon their position, for those who have ventured to speculate have suffered considerably, and the deplorable condition into which our markets have drifted may result in still more disastrous consequences. There are some upon whom good advice is always thrown away, and others who have periodic to speculate themselves upon their position, for those who have very reason to congratulate themselves upon their position, for those w

in the market.

COPPER.—Another week has passel, and another fall has taken place, and the equanimity of the market continues to be greatly disturbed by the unsatisfactory state of trade generally and the alarming state of politics in particular; so that a further declension in value appears inevitable. The cry of war is quite sufficient to deter speculators from operating—at least, those who have anything to lose—and the legitimate demand both for shipment and consumption seems too to lose—and the legitimate demand both for shipment and consumption seems too limited to enable hollers to maintain the market at its present height for any length of time. The stock being so heavy is a very weak point of the market; and should a declaration of war be made a bad impression may ensue, and another collapse take place. In any case, sales would become difficult at any reasonable price, as no one would cause a bettled fall in the market. There is certainly no pressure to realise would cause a settled fall in the market. There is certainly no prospect of prices recovering yet adwhite, and unless holders are prepared to shelve their copper for six or perhaps 12 months they had better sell out without delay. But until war is positively declared there exists a faint hope that peace may be preserved, and the chance remains of disposing of some proces; therefore, all weak holders should not hesitate to avail themselves of what will probably be their last opportunity. The present time is too critical for any but strong firms and large capitalists to be doing business of any magnitude, and safety should be the first consideration of all buyers.

buyers.
Du Monday the price of Chili bars was quoted 711.: Wallaroo, 781.; and Burra, f. Quotations remained the same on Tuesday, but on Wednesday the market is down 20s, per ton; this was owing to the unfavourable reply to the Protocol om Turkey, and also to the annoncement of the Australian monthly sales of prer. The quantity of Burra for sale on the 17th inst. is 200 tons, and 406 tons Wallaroo. On Thursday the market was wanting in animation, three months' illi bars were offered at 701. 10s., but buyers would not give more than 7ct. The sard of Trade Returns of the exports of copper for March compare rather more vourably, and it is most essential that they should continue to improve. The all leaving Bombay on the 17th ult. showed a more hopeful market, and braziers dadvanced 8d. per cwt., although tiles were slightly lower. Yellow metal had steady; sales of Lake Superior amounted to 170,000 to 180,000 lbs., at 12% c to

vious days has in a measure been overcome, but at any moment it is quite possible to be again reversed, for the market remains in a most feverish and sensitive state, and subject to corresponding influences that are operating adversely upon all the Exchanges of Europe, and there is consequently no security from one day to

another.

IRON.—The general condition of the market is unsatisfactory, and prices continue to droop, but according to the Board of Trade returns shipments are increasing. Thus, the total exports of iron and steel in March were 176,948 tons, against 149,196 tons in 1876, and 164,067 tons in 1875. The accounts from the North of England are very unfavourable. The holidays are said to have been unusually extended on account of the extreme depression. In South Burham stocks are revery unfavourable. The holidays are said to have been unusually extended on account of the extreme depression. In South Durham stocks are reported to be increasing, and in March there was an addition of 25,648 tons, the aggregate stock now being 225,395 tons, and it is thought that immediate steps will be taken to reduce the production of pigiron, which is greater than at this time last year, while the consumption is much smaller. The demand for manufactured is also dull, and prices of both wrought and unwrought are easier. In Scotch pigs there is lattle or no change, and mixed numbers are now quoted at 54s.

Week ending April 7, 1877	9,071
Increase Total decrease for 1877 Imports of Middlesborough pig-iron into Grangemouth:—	515 3,146
Week ending April 7, 1877 Tons Week ending April 8, 1878	
Increase Total increase for 1877	250 11,412

of the year compane well with the two previous years, there being 9068 tons against 8832 tons in 1876, and 6402 tons in 1875.

STEEL.—The demand considerably increases for steel rails, but the prices at which recent contracts have been taken are low, 64, 9s, having been accepted, if not lower. There are buyers now in the market for several thousand tons. The demand is also better in France, and last year they exceeded the previous year's make by 10,000 tons. 10,000 tons.

10,000 tons.

QUICKSILVER.—The price has again decline 1 to 7l. 5a., not withstanding the quantity exported is much larger than last year and 1875. From January to March 31 there was exported 1.847,483 bs; in 1876, 1,251,682 lbs.; and in 1875 1,104,522 lbs. The reduced price has probably been the means of stimulating the demand. The advices from from New York state that the market there is dull and nominal at 48 c. gold. The San Francisco market is slightly firmer, quoted at 41 c., but 1400 flasks were sold previous to the mail leaving on the 22nd ult. at 42½ c., settling down to 41 c.

TIN-PLATES.—The demand is unimproved, and several of the works have reduced their make. Quotations are still low, but concessions

TIN-PLATES.—The demand is immproved, and several or the works have reduced their make. Quotations are still low, but concessions upon current prices have to be made for quantities.

TIN.—The tendency of the market is decidedly downward, and unless supplies diminish it is impossible to uphold the market. The firmness of holders has hitherto sustained the market, but when once this breaks down the price will rapidly decline. There is not only general dulness prevailing in all branches of trade, which considerably reduces the warts for ordinary purposes, but the tin-plate trade general dulness prevailing in all branches of trade, which considerably reduces the wants for ordinary purposes, but the tin-plate trade is particularly dull, and the stock of the continues to increase. Independent of commercial distress, there is the depreciating effect which war would, probably, have upon the value of produce; and, added to this, in the event of war dearer money may be reckened upon as a certainty. The market has been very dull all the week, and prices declining, and they close at their worst, Straits offering freely at 90. 154., but no bnyers at this figure. Australian is also affected, and quoted nominally 90. 168. Advices from Rotterdam on the 10th state Bunca to be selling at 42½ fis. and Billiton at 414. The Board of Trade Returns show a decline in the exports during the last quarter. This year there was only 22,65 exts, against 21,126 exts, last year, and 27,447 exts. in 1375. The New York market is in the same apathetic state as our own, and assumes a declining tendency; but, strange to say, the advices from Penang are higher, and shipments continue to be made me apathetic state as our own, and assumes a declining tendency; but, so say, the advices from Penang are higher, and stipments continue to be Europe and America in the face of a positive loss, and no prospect of a nate profit. The advance in price, however, is owing more to rioting dining districts than to any other cause, and supplies were partly stopped.

THE IRON TRADE—(Griffiths's Weekly Report).—Fri lay Evening.
—The Glasgow market has been steady to-day, with only a molecule business doing; it closed with buyers of g.m.b. warrants at 53s. 8d., sellers asking 53s. 9d.

This is virtually the same as our quotation last Freday of 53s. 9d. We quote makers' No. I from: Gartsherile, 61s. 6d; Coliness, 65s.; Calder, 62s. 6d.; Langloan, 62s.; Summerlee, 59s. 6d.; Monkland, 53s. 9d., Collego, 7d. 6d.; Langloan, 62s.; Summerlee, 59s. 6d.; Monkland, 53s. 9d., fo. b. Leith; Kenniel, 59s. 6d.; Eglington, 56s., fo.b. Ardrossan: Shotts, 61s., fo.b. Leith; Kenniel, 59s. 6d.; Colb. Boiness. The principal Quarter day of the Black Country was held in the Birmingham Exchange vesterlay. The meeting was not as large as usual, but the principals of the great firms in Staffortshire, Shrophire, the Vest Coast, Northamptonshire, and Derbyshire were all present. It was known previously by those who attended the meeting that no change could take place in the price of iron. We have repeatedly stated this circumstance in all the previous reports. The London merchants attended as usual. Most of the leading flows were represented. Mr. Abraham Durby, also of the Coulbrookd de, was in Birmingham. Mr. Robert Heath, Mr.; Mr.-J. T. Smith, of Barrow; Mr. Massieks, of Millom; Thomas Whitwell, of Stockton; Mr. Charles Fourcares, the executive Government engineer of irrigation in India, and numerous other distinguished persons in the trade attended the meeting, including Mr. Fisher Smith. T. Horton, J. Lloyd, Gregory Norris, Joseph Robinson, Mr. Udal, James Bird, Mr. Caine, Mr. Reece, Mr. Parsons, Mr. Swan, Mr. McNiel, and others from various districts.

The manufacturers of tin-plates were fully represented, and, in face of the fearfully depressed state of this branch of the trade, the tin-plate makers were generally cheerful, although their trade was never so bad as it is now, for ookes are actually 2s. and charcoals 3s. per box less than they were ever known to be. There was very little business THE IRON TRADE-(Griffiths's Weekly Report).-Fri lay Evening.

prices, good hematite mine being scarce and firm in price in the West Coast district.

The sales of Staffordshire pig iron may be reported mil; the contracts taken by each manufacturer were only for one or two boat loads. The great p roducing firm of best pig:ron—the Lilleshall Company, in Shropshire—invariably make large sales at this meeting. We are, however, on this occasion unable to state the amount of their sales. The husiness done in Northamptonshire, Frodingham, Derbyshire, South Wales, and Middlesbrough was not one third the usual amount, and the manu acturing trade was quite as inactive as that in the raw material. We observed no vigour in any department of the market except sheet iron for gulvanising purposes and nail rods, and this presented no volume of demand to constrained the general stagnation which un sapply at this moment pervades every department of the iron trade.

In the bar depôt the orders given to the leading houses by the Thames-street merchants here are not so large as usual, and the same remark applies to the orders of the London and Bristol merchants. In bolier-plates the scarcity of orders lately witnessed was developed in the transactions of buyers at this Quarter-day, and the local engineers and hardware manufacturers of the Black Country manifested no desire to buy large parcels of iron, and the same feeling was reciprocated by the ironmasters, who evinoed extraordinary apathy to new business. In fact, if viewed from a business point of view, this Quarter-day was the most inactive that ever we attended. Perhaps the very unsatisfactory condition of the tin-plate trade ministered to the disheartening condition of the iron market at this Quarter-day.

Messrs FBN, JAMES, and Co.—Coppers: An enquiry, comparatively active,

The Peninsular and Oriental steamer takes 87,000%. to Bombay.

DOLLAES—owing to limited arrivals, have improved in value, the lig

54d. per Oz.

TIN-PLATES—Messrs. BROOKER, DORE, and Co. – The trade continue in a Tin-PLATES—Messrs. BROOKER, DORE, and Co. – The trade continue in a trade depressed state, but the subjoined returns below show a slight increase is wartities shipped: – During the three months ending March 31, 1876, the shipped were 30,990 tons, of the value of 712,789l, whilst in the corresponding period the present year the quantity was 34,317 to us, of the value of 702,949l. In all other metals the alterations in value had been but trivial.

The market for all kinds of stock were very much depressed during the early part of the week, and the Mining Share Market has participated in the general dulness, but towards the close thins look a little brighter, and a few mines have been enquired for.

Those chiefly dealt in have been Great Lax's, "tookhope, va. East Van, North Laxey, Roman Gravels, Tankerville, Grenille, Leadhille, Glenroy, and a few others.

Tin Minies show no change. Dolcoath, 34 to 36; at the these monthly meeting on Monday the accounts showed a profit of long and a dividend of 5s, per share was made. The costs to March! were 10,992/. Tin sold, 293 tons, 12,693/. The agent reported that the mine was looking well. The shaft is now down 38 first the mine was looking well. The shaft is now down 38 first the deepest point yet reached by any mine. The 338 level east worth 50/. per fathom; 338 west 60/. per fathom. The souls intersected in a cross-cut from the 302 is worth 28/. per fathom for the distance explored.

intersected in a cross-cut from the 302 is worth 28t, per fathon for the distance explored.

At Wheal Basset quarterly meeting the accounts showed a less 2118t, and a debit balance of 8690t. A call of 2t, (102tt) per sha was made. The costs in July were 3468t, returns of copper on 1073t; tin, 238t. The agents report that extra work to the enter of 1000t, is included in the costs and are please 1 to state that consider they have arrived at the time when calls will not be a cuited for the further development of the mine. Carp Research consider they have arrived at the time when cans will not be quired for the further development of the mine. Carn Brea, $\frac{1}{3}$ 6; Cook's Kitchen, 3 to $3\frac{1}{2}$; South Carn Brea, $\frac{1}{4}$ to $3\frac{1}{4}$; South Frances, $\frac{1}{4}$ to $7\frac{3}{4}$; South Frances, $\frac{3}{4}$ to $1\frac{1}{4}$; Wheal Grenville, $1\frac{1}{4}$ to $1\frac{1}{4}$; Wheal Kitty (St. Agnes); 2 to $2\frac{1}{4}$; Wheal Peevor, $2\frac{1}{4}$ to $3\frac{1}{4}$; Why, $1\frac{1}{4}$ to $1\frac{1}{4}$. Uny, 1\(\frac{1}{5}\) to 1\(\frac{1}{5}\).

COPPER MINES are very quiet. Devon G.eat Consols, 3\(\frac{1}{5}\) to 4

COPPER MINES are very quiet.

Copper Mines are very quiet. Devon G.eat Consols, 3\(^1\) to 4\(^1\); no particular change here, and the points in operation are works the aggregate 175\(^1\), per fathom. Bedford United, 10s. to 15s. Cs. thedral, 20s. to 30s; Hingston Down, 10s to 15s.; Parys Mountin, 7s. 64. to 8s. 64.; Penstruthal, 10s. to 12s. 6d.; Prince of Wale, 2s. 6d. to 5s.; Sauth Gradon, 120 to 130; West Seton, 30 to 3; West Tolgus, 60 to 62\(^1\); Wheat Crebor, 2\(^1\); to 3. East Crabb, 12s. 64. to 17s. 64; the accounts for three months ending F-branshowed a credit balance of 202\(^1\). The copper ore realised 163\(^1\). Lead Mines show no material change, though there is non-business doing in them than in any others. Minera, 10 to 12; the directors have declared a dividend of 4s. per 5l. share, fee of iscome tax, out of the profits of the 16 weeks' working to March 3, and is payable on May 11. Roman Gravels, 12\(^1\) to 13; the 10 south is worth 2 tons of lead ore per fathom. The sampling forthe month is 220 tons of lead ore. Tankerville, 8\(^1\) to 8\(^1\); the sampling here for the month is 100 tons of lead. West Tankerville, 1\(^1\) to 1\(^1\); the oflead ore sold this week realised 404\(^1\). 12s. 6d. Rookhope shars have been in fair demand at 19s. to 21s. have been in fair demand at 19s. to 21s.

have been in fair demand at 19s. to 21s.

Great Laxey, 21 to 22. North Laxey, 15s. to 17s. 61; at the meeting (full particulars of which will be found in another column the accounts showed a balance of assets over liabilities amounting to 32924, 19s. 114. The statement from March, 1876, to March, 1876. to 3292/. 19s. 11d. The statement from March, 1876, to March, 1876, shows sales of lead ore, 120 tons, 1880/. 15s.; the costs for the sage periol, 3940/. 8s. 4d. The next sales of lead, we understand, will to 50 tons for the quarter, estimated at 800/., against a cost of 900/. 1000/. Glenroy, 1½ to 1½; a telegram (April 12) states that the after north has improved, making blende and copper; and the agent never saw it looking so well before. The 65 stope south making stronger blende, and not yet through the lode. Other stopes and cross-cuts without change.

stronger blende, and not yet through the lode. Other stopes and cross-cuts without change.

Van, 35 to 37, ex. div. East Van has been very flat at 6 to 6½. Van Consols, 2 to 2½; Glyn, 1½ to 2; Bodidris, 1 to 1½; Aberdaunau, ½ to ¾; Assheton, 1½ to 2; Ladywell, 1 to 1½; Leadhills, 6½ to ½; Pennerley, 10s to 12s.; Plynlimmon, 9s. to 11s.; Llanrwst, 2 to ½; Gorsedd and Merllyn, 4½ to 5½. Combination, ½ to ¾; there is a lab in the end below the 28 2½ ft. wide, and worth ½ ton of rich sizes. Lead were fatham. The mine is opening out well. Clementia, 30 to in the end below the 28 2½ ft. wide, and worth ½ ton of rich site-lead per fathom. The mine is opening out well. Clementina.30 to 40; D'Eresby, 20 to 25; St. Patrick, ½ to 1½; Trebeigh Consols, 8, to 10s.; West Assheton, ¾ to 1. West Chiverton are flat at 16 to 17. West Craven Moor, 12 to 13; Grogwinion, 3½ to 4½; Red Rock, ½ to 2½; South Cwmystwyth, 2½ to 3½; New Cwmystwith, ½ to 55. Harmon, 3 to 3½; Wye Valley, 3 to 4; West Wye Valley, 2 to 3; West Goginan, ¾ to ½; Pateley Bridge, 2½ to 2½; Pennant, ½ to 6. FOREIGN MINES.—Argentine, 4½ to 5; Blue Tent, 3 to 3½. Chotales, ½ to ½; the gold return for the month is 4354, against a cot of 4464, which includes 254 on construction account. Good discoveries have been made at San Sebastian and east San Benito, and the latter, the manager states, is likely to prove of greater value.

the latter, the manager states, is likely to prove of greater value than most of the mines he has worked, and prove more profitable to the company than any it has yet developed. Fortuna, 6 to 6: the accounts show that the reserve fund, after payment of the dis-

dend of 6s. 8d. per share, amounts to 7234/.

Alamillos, 1½ to 1½, ex div.; the accounts showed a profit of 1592, out of which a dividend of 1s. per share was declared, and 167/.erried forward. Linares, 5½ to 6½; after the payment of the divided of 9s. per share there is a balance in hand of 774/. Panulcillo: the accounts just published show a profit in six months of 8232/.11s.11s.

Lawali advices show—gold remittance 1130/. costs. 913/. Bidsee. Javali advices show—gold remittance, 1130t; costs, 96tt. Birdsey, \S to $\frac{1}{4}$; Cedar Creek, $\frac{1}{2}$ to $\frac{3}{4}$; Don Pedro del Rey, 9s. to 11s.; Electrod and Aurora, \S to \S ; Exchequer, 13 to 2; Flagstaff, $2\frac{1}{2}$ to $2\frac{1}{4}$; Frontino and Bolivia, $1\frac{3}{4}$ to 2; I.X.L., $\frac{1}{4}$ to $1\frac{1}{4}$; Last Chance, 19s. to 12s.; New Quebrada, $4\frac{1}{4}$ to $4\frac{1}{2}$; Port Phillip, 10s. to 12s. 61.; Richmond, $5\frac{1}{2}$ to 6; St. John del Rey, 250 to 270; Santa Barbara, 2 to $2\frac{1}{4}$; The pure $\frac{3}{4}$ to $\frac{1}{4}$; Dort Phillip, 10s. to 12s. 61. mond, 5½ to 6; Tecoma, 3 to ½.

The Market for Mine Shares on the Stock Exchange during the week has been affected by the adverse influences operating upon all other securities. Why this should be there is no sufficient reason. to be found, especially remembering that in all previous political complications, even with the worst issues, mine shares have invariably maintained a negociable value conspicuous among the sur-

rounding depression.

The Clogau Mine manager's report states that the mine, on the whole, is looking better; the total amount of stuff stamped for the two months ending March 31 was 387 tons. The gold of tained from the battery-box stuff is 90 lbs. of stuff, which yields assay 90 ozs. 3 dwts. 5 grs. of gold per ton, and 4 ozs. 14 dws. 10grs of gold which has been obtained from the battery-box stuff smelled. The amount of concentrated stuff obtained from the percu serial I to is 15 cwts., which yields by assay I oz. 16 dwts. per ton, and varies from 2 to 5 per cent. of copper. There

the firm. The stock being so heavy is a very weak point of the market; any and it a dealaration of war be made a bad (impression may cause, and another per take place. In any case, sales would become difficult at any reasonable, as no one would care to be burdened then, and a continuous pressure to be would care to be burdened then, and a continuous pressure to be would care to be burdened then, and a continuous pressure to be would care to be burdened then, and a continuous pressure to be would care to be burdened then, and a continuous pressure to be would care to be burdened then, and a continuous pressure to be would care to be burdened then, and a continuous pressure to be would care to be burdened then, and a continuous pressure to be would care to be burdened then, and a continuous pressure to be would care to be burdened then, and a continuous pressure to be would care to be burdened then, and a continuous pressure to be would care to be burdened then, and a continuous pressure to be would care to be burdened then, and a continuous pressure to be would care to be burdened then, and a continuous pressure to be would care to be burdened then, and a continuous pressure to be would care to be burdened then, and a continuous pressure to be would care to be burdened then, and a continuous pressure to the work of the cont

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MARKET WIN

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eived by the Pacific mail steamer this week, and a further ship-eived has been advised, so that regular fortnightly shipments would ment has been advised, so that regular fortnightly shipments would appear to be coming forward.

and cillo, 14 to 14; the directors have issued the statement of junts for the half-year ending December, the result of which will achieve in the yearly accounts at the November meeting. The net fit for the first half of the current financial year was 8332, 11s, 11d, it is slightly bole 332. included in the yearly accounts at the November meeting. The net included in the yearly accounts at the November meeting. The net included in the considered satisfactory. It is slightly below the estimate in the property of the unfavourable exchange. During the inference of the unfavourable exchange. During the property of the product at Panulcillo, and the price reasons at the product of Mr. F. G. Welch gives a review of operations the half-year ending December, and shows the quantity of new the half-year ending December, and shows the quantity of new and opened up to that date, and condition of the same to present as the various causes of the less production and greater costs. The various causes of the less production and greater costs are production of about 40,000 quintals metrico, at 5½ to 6 per anally production for January amounts to 30,000 quintals erecent. The production for January amounts to 30,000 quintals erecent. The production for January amounts to 30,000 quintals erecent. The production for January amounts to 30,000 quintals are cent. The production for January amounts to 30,000 quintals are cent. The production for January amounts to 30,000 quintals are cent. The production for January amounts to 30,000 quintals are cent. The production for January amounts to 30,000 quintals are cent. The production for January amounts to 30,000 quintals are cent. The production for January amounts to 30,000 quintals are cent. The production for January amounts to 30,000 quintals are cent. The production for January amounts to 30,000 quintals are cent. The production for January amounts to 30,000 quintals are cent. The production for January amounts to 30,000 quintals are cent. The production for January amounts to 30,000 quintals are cent. The production for January amounts to 30,000 quintals are cent. The produc get though sing by English miners in the Comunes wet shaft offers the least ay possible. Therefore, looking at the improvement of the lode ay possible. Therefore, looking at the improvement of the lode that point, and good prospects in the Mina Vieja, he suggests that east of bring-machines in these mines be carefully considered, a premature adoption of an imperfect machine would be madness, pudging from the reports in the home and foreign journals there utilised to be a certain degree of perfection reached in some of machines, and he suggests that costs of plant, &c., should be estimel, and the matter laid before the board. Sidnmond, 5½ to 6; the usual weekly telegram gives the "Week's industrial at the matter laid before the board. Week's in the suggest of \$30,000. We report from the manager has arrived this syalle of \$30,000. We report from the manager has arrived this sk. The run this week was, it is stated from two furnices, and it these should be kept going at this period of the year, when it usual to shut all down, speaks well for the resources of the sea. The Richmond Compuny have, it appears, secured the ser-

that these should be kept going at this period of the year, when the is usual to shut all down, speaks well for the resources of the ingest to shut all down, speaks well for the resources of the ingest of the kept going of the services of Chirence King, Mr. Hague, of San Francisco, and Professor. Price, as witnesses in the injunction suit about to be tried. The regist of three such emment men, whose skill as mining engineers is so well been, not only throughout America but almost equally so in this country, canbeau, and only throughout America but almost equally so in this country, canbeau, it is thought, full to tell favourably. Mr. King can point to the present description of the great Richmond lode as a triumphant proof of the soundness of sides as expressed in the trial in 1873. To establish the fact that the Richisal description is the surface of the sundness of the season of the sundness of the soundness of the sundness of

arginia expenses, including cost of mining and milling, \$20,222.— Ramas Eareka Mine: Receipts (including sulphurets), \$43,212; total alifornia expenses, including cost of mining and milling, \$18,570.

Exchequer, 14 to 2; the first clean-up is expected to be announced Exchequer, 13 to 2; the first clean-up is expected to be announced early in May, as according to the last advices the furnace was in full blast, and everything appeared to be working satisfactorily. Mr. Smith, who worked the O'Hara furnace at Peavine with such successful results, has now complete charge of the Exchequer mill and furnace. LX.L., \(\frac{1}{6}\) to 1\(\frac{1}{6}\); the Ophir to be promises not only a supply of good ore, but its explorations will drain the other portions of ground when the drifts are carried further south. Advices daily expected from the manager that O'Hara is building the

T e market for Hydraulic, or Gold Washing Shares, has not exhi Temarket for hydraune, or Gold washing shares, has not exhibed much change. There are a few transctions taking place, and the more settled feeling in foreign matters a good business may expected in this description of security. The latest advices are March 30, at which date considerable rain had fallen, and still ontinued to fall, in California. Blue Tent, 3 to 3½; the latest systehes mention that there was a daily supply of about 2000 in. If free water flowing through the company's ditch; and this, with a upplemental supply from the South Yuba Tunnel, was being used openment supply from the South Tuba Tunnet, was being used effect in the South Yuba and Enterprise claims. From the eddy report it would appear that the actual washing time, from a clearing up of \$20,250 announced by telegram, was about days full time (24 hours each), thus showing a daily yield of arly \$800. Birdseye Creek, § to ½; a telegram received on Thursy announces the result of washing for March—a gross return of \$20,000 and a profit of \$2250. This is considerably in advance of the treum and the claim will no doubt yield well this season if astreturn, and the claim will, no doubt, yield well this season if ufficient water is available for prosecuting the work vigorously. Head Creek, $\frac{1}{2}$ to $\frac{9}{8}$; the advices in another column show that the dily washing with all the water at his command, and agent was steadily washing with all the water at his command, and advantage. The prospects here would appear to be much more encouraging. Oregon (pref.), 4 to 4½; the last advices from the agent state that he had pienty of water, and was washing with all energy. Lead Mines have remained without special feature. The transactions have been few, but quotations do not point to lower prices. Van, 35 to 37; no change reported worthy of note. The 105 is progressing well and beginning, present driving by the side

ran, 30 to 34; no change reported worthy of note. The 105 is progressing well and looking promising; present drivage by the side of the lode. Penerley, \(\frac{1}{2}\) to \(\frac{3}{2}\); the 130 east continues to show a strong promising lode, 3 ft. wide, containing good stones of lead. Other points without alteration. Pateley Bridge, 2 to 2\(\frac{1}{2}\); in the 3 teast, on rake vein, the end has just reached the first bed, which has been very productive in the 20, and the agent anticipates similar good results at present depth. The operations on Lamb vein are delayed somewhat by the great rush of water. No change elsewhere.

Sewhere.

Subjoined are the closing quotations:—

Asheton, 1½ to 2½; Carn Brea, 34 to 36; Devon Great Consols, 3½ to 4;

Asheton, 1½ to 2½; Carn Brea, 34 to 36; Devon Great Consols, 3½ to 4;

Asheton, 34 to 36; East Caradon, 54 to 5½; East Van, 6 to 6½; Glyn, 1½ to 2;

reat Lavey, 2+ to 22; Great West Van, ½ to 5½; Hingston Down Consols,

40 5½; Leathillt, 3½ to 6½; Marke Valley, ½ to 1½; Penstruthal, ½ to 5½;

10 to 8; Pateley Relige, 2 to 2½; Pennerley, ½ to 3½; Penstruthal, ½ to 5½;

10 to 8; Pateley Relige, 2 to 2½; Pennerley, ½ to 3½; Penstruthal, ½ to 5½;

10 to 8; Pateley Relige, 2 to 2½; Pennerley, ½ to 3½; Penstruthal, 3½ to 5½;

10 to 8; Pateley Relige, 2 to 2½; Pennerley, ½ to 3½; Penstruthal, 3½ to 5½;

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10 to 8; Pateley Relige, 2 to 2½; Pennerley, ½ to 3½; Penstruthal, 3½ to 5½;

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10 to 8; Pateley Relige, 2 to 2½; Pennerley, ½ to 3½;

10 to 8; Pateley Relige, 2 to 2½;

10 to 8; Pateley Relige, 2 to 8;

10 to I, call paid; Parys Mountain, ½ to ½; Penstruthal, ¼ to ½; o 8½; Tincroft, 18 to 19; Van, ton, ¾ to 1½; West Basset, 3 to 4; to 1½; Wheal Crebor, 2½ to 3; 16ths to 7-16ths; Argentine, 4½; ; Cape Copper, 40 to 42; Cedar rrible, 1½ to 1½; Don Pedro, ½; Emma, ½ to ½; Exchequer, %; Kapanga, 2½ to 2½; Last 4 to 34; New Pacific 34 to 34; : i. K.L., % to 1½; Javall, 7s. to 9s.; Kapanga, 2½ to 2½; Last. cs. ½ to ½; Malpaso, % to ½; Malabar, % to ¾; New Pacific, ½ to ¾; ½ (Quebrada, 4½ to 4½; Pestarena, ½ to ¾; Plumas Eureka, 2½ to 2½; ½ to ½; Elchumond Consolidated, 5½ to 5½; 8t. John del Rey, 250 to 8an Pedro, ¾ to ½; Sierra Buttes, 1½ to 1½; South Aurora, ½ to ½; Last. John del Rey, 250 to 8an ½; United Mexican, 2 to 2½.

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Collieries.—The depressed and panic-stricken condition of the neral share markets e markets is, of course, to some extent reflected by col-which on this account alone close flatter than last week. ery shares, which on this account alone close flatter than last week, but it will be readily admitted that, whether the present situation of Eastern affairs leads to war or to less probable peace, any definite melasion of the suspense which has now been so long endured is likely to have Evourable effect on trade, and no branches of trade will sooner or more debelly show this effect than those in read and iron. We do not conceal from our desirable better than they have been; and, while war would create an increased lemand for finel and metal, peace would lead to more vigour in general manufacture, and the result in either case would lead to more vigour in general manufacture, and the result in either case would lead to more vigour in general manufacture, and the result in either case would lead to more vigour in general manufacture, and the result in either case would lead to more vigour in general manufacture, and the result in either case would lead to more vigour in general manufacture, and the result in either case would lead to more vigour in general manufacture, and the result in either case would lead to more vigour in general manufacture, and the result in either case would lead to more vigour in general manufacture, and the result in either case would lead to more vigour in general manufacture, and the result in either case would lead to more vigour in general manufacture. Many signs of desired vigour or general manufacture of the control of th

and there is, therefore, good ground for anticipating an improvement in the price of coal. Slack is already looking up, owing to the commencement of the brick-making season, and steam coal is firm in most markets. House coal is steady, but shows very little signs of any early improvement. Lilay Hall shares are at 9½ to 10; it is expected that the pits will now produce an output of from 60 to 100 tons, to be gradually increased as the levels are extended. We hear that Chapel House continues to do a good trade, and is plentifully supplied with orders, in some cases realising better prices. The sinking of the 15-ft, shaft is being carried on very rapidly, and no time will be lost in the necessary opening out of the Park Mine. The shares are 2½ to 5½. Alltani shares are quoted 5 to 5½; the new coal is looking well. The following are the closing prices (the depreciation, where it appears, arising from nothing specially affecting the respective shares, but from the depression, referred to above, in all the share markets)—New Sharlston, 3½ to 4; Cakemore, 2½ to 3; Cardiff and Swansea, 1½ to 24; Bilson and Crump, 4½ to 5½; Thorps Gawber, 1½ to 2; Cannock and Huntington, 2; Hamstead, 10; Sandweil Park, 20½.

COMBMARTIN.—Upwards of 4000 shares out of the 6000 into which this mine is divided are held in its locality, and the way in which it is opening out is being watched with great interest and satisfaction in Exeter and elsewhere. Prior to the formation of the cost-book company the local proprietors had expended a sum equal cost-book company the local proprietors had expended a sum equal to about 7s. each on the present shares; and after making a clean book a call of 1s. per share was made, of which there is still a balance in hand, and it is hoped another 1s. may make a good paying mine. Local parties have been buying lately, and are looking for a high price for the shares in a few months. There is an office of reference in London, where reports are sent weekly. In a former working Combmattin pro luced 60,000% worth of rich silver-lead, some of it producing 1200 ozs. of silver per ton, and the average was 62 ozs. The main lode was then heaved by a cross-course into undeveloped ground. A parallel lode also yielded great riches to the 28 fm. level; and the object of the present company has been to clear the shaft to work this and the main lode also in new dry ground. the shaft to work this and the main lode also in new dry ground So far everything is equal to expectation.

WEST SETON.—This mine continues to have good sales of copper ores, and seems likely to increase them as the bottom part of the mine is opened up. At the Ticketing held at Redruth last week the mine is opened up. At the Ticketing held at Redruth last week the parcel of 302 tons (one month's produce) realised 1439/. 14s. The tin returns have also increased by 5 tons per week, and a very valuable piece of ground for tin has been discovered in the eastern part of the mine. The 150 still improves, and the agents are very sanof the mine. The 150 still improves, and the agents are very sanguine in their expectations of meeting with valuable discoveries of copper the further they go west.

British Enterprise in Fiji.—An attractive little island—Naitamba—in the Fiji group, now annexed to the British crown, is being offered for sale by private contract by Messrs. Bell, Crowder, and Greenfield. The island is from 3000 to 4000 acres in extent, is approached from Loma Loma, the second principal town of Fiji, by a sheltered roadstead. The soil is described as of a rich loamy character, suitable for the growth of sugar, coffee, or tobaco; and there are hills, which render it better a lapted for cultivation than other islands in the same group, where ent-rprise is checked by the ravages of hurricanes. There is considered to be little doubt that where land can be bought for even the maximum price usual in unsettled countries—say, II, to 2I, per acre—there is in Fiji a fair field for profitable enterprise. settled countries—say, 12, for profitable enterprise.

Dick,—On April 3, aged 69, much regretted, Mr. W. Edmond, of the Mines Royal Copper Works, Neath. He was a most able smelter, and decor-respondent of the Mining Juarnal, and highly respected by all who knew him

A N L E A D M I N E .—

Particulars of this very valuable Mine will be found in the SIXTE

EDITION Of Mr. MURCHISON'S work on BRITISH LEAD MINES, published

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Revieu

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20 Eberhardi, £362.

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50 Bodidiris, £2s. 6d. 30 Gipn, £1 10s. 3d. 40 Flagstaff, £2½.
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50 Exchequer, £2 1s. 3d. 40 Marke Valley, 17s. 6d. 30 North Laxey, 17s. 6d. 20 Santa Barbara, £1½.
25 Eberhardt, £3½. 20 New Quebrada, £4½. 50 Van Consols, £2 3s. 9d. 20 New Zealand, 42½, 50 Fennerley, 13s, 49 Parys Mount, 9s, 50 Penstruthal, 11s, 10 Roman Gravels, £12¼ 20 Richmond. 10 S. Condurrow, £7½, 20 Santa Barbara, £1¾, 10 Van, £36, 50 Van Consols, £2 3s, 9d

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		L	EAD	O	R	E &	3.	
Date.								
arch								Nevill, Drnce, and Co.
	23-Powell Consolid	20		13	10	0		ditto
	24-New Llangynog	20		13	9	0	*****	ditto
pril	4 - Great Laxey	50	*******	22	15	6	******	Weston, Son, and Co.
	- ditto	50		22	15	6		Treffry's Estate.
	6-Melindur	. 5	19 3	13	1	0		Nevill, Druce, ond Co.
	11-Great Dyliffe			13	15	0	*** **	Panther Lead Company.
	12-Talargoch :-							
	Maesyrewddu	75		11	3	6		Adam Eyton.
	Coetia Llys							Walker, Parker, and Co.
	-Gorsedd & Merllyr							ditto
	- Prince Patrick							ditto
	-Rhyd Alun				3	6		Adam Eyton.
	-Old Treburgett							Sheldon, Bush, and Co.
	- ditto							Treffry's Estate.
	13 - West Tankerville							Walker, Parker, and Co.
	-Rookhope							J. Dinning.
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..... Bagillt Smelting Co. Date. Mines April 11-Talargoch ...

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THE DIRECTORS OF THE SHREWSBURY GAS-LIGHT COMPANY are PREPARED to RECEIVE TENDERS for the SUPPLY THE DIRECTORS OF THE SHREWSBURY GAS-LIGHT COMPANY are PREPARED to RECEIVE TENDERS for the SUPPLY of the best description of GAS COALS and CANNEL, for a period of one, two, or three years, commencing July 1st, 1871. Such coals to be as free as possible from sulphur, bats, bind, refuse, and dirt, and shall be weighed upon the company's machine (24:0 lbs. to the ton), and delivered free, by and at the expense of the contractor, at the London and North-Western or Great Western Goods Station,

y.

specifying the coals and the pits at which they are to be raised, must ed on or before the 24th day of April next.

to r any tender will not of necessity be accepted.

B. B. DARWIN, Secretary.

Notices to Correspondents.

* Muun inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

WEST GODOLPHIN.—Being a shareholder in this mine I have received a statement of accounts and report, and, had it not been for the purchasing of a large engine, I presume a dividend would have been paid. It is, however, satisfactory to find that even at the low price of tin they have a credit balance of 933. As the output has considerably increased it will be much more so when the new and more poweful engine is got to work.—A SHAREHOLDER: Beljast, April 9.

PURCHASE OF SHARES—"O. P. Q." (Coolrain).—Any respectable broker would complete the purchase of shares for you within 21 days. Your best course will be to write and demand the transfers, and if not received by return of post put the matter in the bands of your solicitor.

WESTAM WILDER—II a shawer to your correspondent. "Inpulger," he will if a

the matter in the hands of your solicitor.

Wheral Whisper.—In answer to your correspondent, "Inquirer," he will, if a shareholder, in a few days receive a notice calling a meeting, and in the meantime it may be satisfactory to him to know that the mine pays its cost even at the present low price of tin.—The Secretars: Finishing Circus.

Received,—"B. H."—"J. H. J."—"A Puzzled Correspondent"—"J. C. J."—
"R. S."—A. Vassard—"Shareholder" (Bristol)—"Shareholder" (Camborne)—
"M. T."—"B. G. S."—"Reader" (Edinburgh): We have not space for such matters—"Shareholder" (Dublin): Next week—"E. S."

IMPORTANT NOTICE—REDUCTION OF POSTAGE ON THE "MINING JOURNAL."—In consequence of the new POSTAL CONVENTION, which came into operation on July 1, the postage of the Mining Journal to many countries will be reduced to one fourth. Henceforth the subscription will be 1l. 10s. 4d. per annum (39 frs.), postage included, for the following countries. The amount will, if desired, be collected at the subscriber's residence at the end of each year. The subscription continues until countermanded:—Austria, France, Belgium, Denmark (including Iocland and the Farce Islands), Egypt, Germany, Gibraltar, Greec, Heilgoland, Italy, Luxemburg. Netherlands, Norway, Portugal (including Madeira and the Azores), Roumanii. Russia, Servia, Sweden, Switzerland, United States, Malta Turkey, Morocco, funis, and the Canary Islands. Spain 1l. 19s. (50 frs.)

THE MINING JOURNAL.

Bailway and Commercial Gazette.

LONDON, APRIL 14, 1877.

COAL AND IRON PROSPECTS.

Now that we have got through the first quarter of 1877 the time appears opportune for glancing at the state of our coal and iron trades during that period, and in endeavouring to look forward to what it is likely to be. During the past three months there has been a marked increase in our coal-producing power owing to the opening out and developing of several extensive collieries, but the consumption, on the other hand, has fallen off, and with the the consumption, on the other hand, has fatten on, and with the approach of summer we certainly cannot see how there can be other than a still further decline in the demand for house coal in particular. Steam coal, however, may be more active, but will scarcely counterbalance the loss on the other description. So far as England is concerned, we have been told by Royal Commissioners that the consumption of coal will augment with the increase of our population; but this has not been the case, as can be easily proved. If we take sumption of coal will augment with the increase of our population; but this has not been the case, as can be easily proved. If we take London, we find that up to the end of March City dues were paid on 139,946 tens less than in the same period of 1876, although the price was not only less than last year, but as low as in 1870 and 1871. The falling off, therefore, cannot be ascribed to the high charges and large profits of merchants and colliery owners, whatever may have been the state of trade at home. Hitherto we have been able to point to the large yearly increase of our exports of coal, not only to some of our vast possessions but to all parts of Europe not only to some of our vast possessions, but to all parts of Europe as well. But in the last quarter our exports of coal and fuel gene-rally were only 2,950,636 tons, against 3,165,400 tons for the corre-sponding quarter of 1876. This, too, was not caused by high prices, for we find that the average export prices for the first three months of 1876 was 12s. 3d. per ton, whilst for the same months of the present year it was only 10s. 5d. per ton. But the fact is we have now to contend with a great deal more competition on the part of German and other colliery owners on the Continent than at any time previously. This is one of the reasons why the price has been so low, for our coalswares for the runges of holding the markets they have ously. This is one of the reasons why the price has been so low, for our coalowners, for the purpose of holding the markets they have so long had nearly in their own hands, have sold the produce of their mines at rat s which have left them no profit whatever. Yet we are told that England has nothing to fear from foreign competition, and that in coal and iron we can hold our own against all the world. We may have done so, but it by no means follows that we shall always be in a position to do the same. High wages and large profits have not at all improved our position abroad, but have led foreign consumers of coal and iron to look to their own natural resources, and this of late they have done to an extent that few are actually aware of. actually aware of.

actually aware of.

If we look to the iron trade there is nothing very assuring with
respect to it either at home or abroad. In pig iron, in the North of
England we find that stocks are increasing, and prices are so low
that the ironmasters in the Cleveland district have just given their men notice of a 10 per cent. reduction in their wages. Tur manufactured iron, we find that in the North, where there manurecured from, we find that in the North, where there are so many rail mills, the quantity sold in the first quarter of 1876 was 38,237 tons, at an average price of 66. 14s. 5d. per ton, against 7232 for the first quarter of 1877, the price being 66. 2s. 7d. per ton. In bars the price has declined from 7t. 13s. 9t. to 6t. 19s. 1d., and plates 7t. 14s. 1d. to 7t. 2s. 3t. per ton. This state of things speaks for itself, and requires no comment, for it shows how utterly prostrate are the most important branches of the iron trade, and will be a sufficient answer to those who think there should be no reduction in wages. But going a little further, we find there has been a decrease. in wages. But, going a little further, we find there has been a decrease in the value of our exports of wrought and other iron during the last three months of 306,448. At the present time, too, in all our ironmaking districts we find many furnaces out of blast, mills standing, and most other branches only partially employed. Russia, it may be stated, has long been one of our very best customers for every description of railway stock, but it is evident she does not description of railway stock, but it is evident every description of railway stock, but it is evident she does not intend to be so any longer, for, from the decree issued by the EMPEROR on Jan. 28, and just made known, it is ordained—(1) "That no further orders for the Government for railway rolling stock shall be given for the future;" (2) the statutes of newly-projected railway companies shall contain provisions binding them to purchase in Russia the whole of their goods wagons, rolling stock, passenger carriages, and locomotives." Premiums are to be given for locomotives only as whall have been contracted evaluations of parts. motives only as shall have been constructed exclusively of parts made in Russian rolling stock works. It is evident from this order that Russia intends to become independent of us, so far as regards railway material at least, but we also know that coal mines on a large scale are opened out there, and that coal-cutting machines are in operation in them. In all like lihood in that vast country, with its immene coal field, premiums will also be held out for the developing of the minerals to the prejudice of our English colliery owners. Looking, then, at the state of affairs at home and abroad, we cannot believe we shall see any likelihood of an improvement in the

not believe we shall see any likelihood of an improvement in the coal trade, but we expect to see a good many more collieries being wound up in liquidation—a process now going on every day—prices low, and work partial. This is a view we believe to be a correct one, and is entertained by many of those who have large interests at stake in connection with our coal mines. No doubt there will be a

revival in some branches of the iron trade, but not to such an extent as to materially increase prices or raise wages, and this we believe is only a fair inference from the facts and figures we have

OUR RAILWAY IRON ABROAD.

It is rather satisfactory to note that the exports of railway iron from the United Kingdom at last present some signs, of improvement. Thus, they amounted in March to 30,078 tons, against 21,939 tons in March, 1876, and 31,339 tons in March, 1875. The exports

iron to the Republic of Peru in the first three months of this year, while in the corresponding period of 1876 we dispatched 1644 tons in the same direction, and in the corresponding period of 1875 no less than 9832 tons. After all, it is the colonial demand which has come to the rescue in 1877 and helped up the year's figures. This will be seen by an examination of the annexed table, showing the exports of our railway iron to British America. British India, and Australasia during the first three months of the last three years:

Colonial group. 1878. 1876. 1877.

British America Tons 6,221 2,083 59

British India 10,015 11,497 11,8500

Australasia 22,883 8,245 11,2774

the first quarter of 1877, as compared with the corresponding period 1876, was thus more than wholly due to the substantial revival in the colonial demand for our railway matériel. It is satisfactory to note that this revival is still continuing, since our aggregate shipments of railway iron to British America, British India, and Australia in March amounted to 15.866 tons, as compared with 8264 tons in March, 1876. In the present feeble state of Canadian railway credit it is not very likely that our railway iron will be in very active request in Canada this year; but, on the other hand, the present low price of rails is evidently tempting the Anglo-Indian authorities to proceed with a certain vigour with the construction of the long-debated Indian State railways. Most of the Australians are clamouring for more railways, and as Australian lines are almost exclusively governmental ventures, we may reckon, we fancy, upon a tolerably well-sustained Australian demand for some time to come. The considerable reduction in the price of rails would really appear The considerable reduction in the price of rails would really appear to be at last producing some of the natural effects lately antici-pated from it, and to be encouraging our foreign and colonial friends to embark in the construction of lines which would otherwise have remained in abeyance. Should this actually prove to be the case, it is an element of hope for our ironmasters. We must not, however, be too confident. There is certainly a little flutter in the long stagnant tide, but it may prove to be a little flutter in the long stagnant tide, but it may prove to be a little flutter and nothing more. We must wait for three or four months before we can appreciate with any approach to exactitude the importance to be attached to the change for the better which is at last observable.

RUSSIAN MECHANICAL INDUSTRY.

The Czan's Government is still making great efforts to develope mechanical and metallurgical industry in Russia. Thus Russian railway companies are to be required to purchase all their rolling stock in Russia, and premiums ranging from \$2400 to 3000 roubles per engine are to be given for locomotives manufactured at Russian works from Russian materials. The fact appears to be overlooked that this highly crutectionist policy may have the effect of heaves. works from Russian materials. The fact appears to be overlooked that this highly protectionist policy may have the effect of benefiting foreign industrials who have established themselves in Russia, as well as native Russian industrials, while if Russian locomotives cannot be produced so cheaply or so efficiently as foreign locomotives Russian industry suffers pro tanto. However, when statesmen, be they American or be they Russian, have a protectionist craze in their heads they are not given to stand upon trifles. We shall be curious to see the result of the experiment to which the CAR has w committed himself; but, prima facie, it will probably terminate failure, as "protected" industry is never robust or vigorous

industry.

What Russia requires is probably more commerce and industry and less Cæsarism. The immense standing army which Russia maintains is not only a constant menace to Europe, but it is also a source of internal weakness to herself. If Russia made the utmost of her own resources, instead of hankering, as she appears to hanker, after the resources of her neighbours, and if the vast masses of men who now make up her huge armies were engaged in some useful inwho now make up her huge armies were engaged in some useful industry. Russia would probably be a very different country to what she now is. Just as money makes money so industry beggets industry; and the more the Russians applied themselves to the development of the resources which nature has placed at their disposal, the more readily would the metallurgical and mechanical interests of Russia grow and expand of their own accord. But "protection to native industry" is just the policy which may be expected from a despotic—and by consequence a short-sighted—Government. The CZAR and his Ministers appear to fancy that Czearism and national development can grow together side by side; but we fear that this is a sad mistake, and that a powerful military nation cannot be at the same time a great industrial country. Not only does an exhausting Czearism enervate the community which adopts it, but it has also the inherent danger of becoming uncontrollable, and of plunging a country into ruinous wars whether its inhabitants desire to be on er ita inhahitenta desi

ad terms with their neighbours or not.

There is another consideration to be dealt with in connection with current aspects of Russian affairs, and that is the present weakness of Russian credit. In a despotic country like Russia the Government counts practically for everything, and when the credit of the Russian Treasury is feeble almost every other description of Russian credit is feeble also. This remark especially applies to the credit of the Russian railways, many of which are guaranteed by the Russian Treasury; and if Russian railway credit is not as strong as it was Treasury; and if Russian railway credit is not so strong as it was the mere giving of premiums to locomotives of Russian manufacture will not necessarily increase the demand for them. The fact is Cæsarism and credit cannot-grow together, and wherever Cæsarism is exaggerated credit languishes. The great pressing needs of Russia appear to be a more steady sustained industry and a more solid stable credit, and to secure these blessings peace is most essential. But Russia is ever haunted by diplomatic deceits and dynastic dreams. More territory appears to be of more importance in the eyes of Russian statesmen than more prosperity.

It is curious to see how extremes meet in this world. In the democratic republic of the United States the cry of "America for the Americans" has more than once evoked a large measure of popular Treasury; and if Russian railway credit is not so strong as it

Americans" has more than once evoked a large measure of popular enthusiasm. In despotic Russia a more or less similar cry of "Russia markable. The forms include native silver, in wires; argential markable.

for the Russians" is now being raised. But is it wise policy for a nation to isolate itself from the rest of the world and to rely whell fancy that nations ought to be gregarious also, and that the industry upon country upon country reacts favourably upon each recently announced by the Czar's Ministers, in regard to the couragement of Russian locomotive building, may be based upon patriotic motives, but patriotism is not always far-sighted.

ROYAL INSTITUTION.—James Dewar, F.R.S.E., Jacksonias Professor of Natural Experimental Philosophy in the University of Cambridge, was on Tuesday last elected Fullerian Professor of Cambridge, was on Tuesday last elected Fullerian Professor of Cambridge, in the room of Dr. Gladstone, resigned. SOCIETY OF ARTS: Chemical Section.—The lecture on Thursday, next will be by Chas. W. Vincent, F.R.S.E., F.C.S., "On Spontages Combustion in Factories and Ships."

COAL AND IRON IN THE UNITED STATES.—There has been light change in manufactured iron at Philadelphia, except that process change in manufactured irons. Consumption is rather increase. change in manufactured iron at Philadelphia, except that proceed rather easier for all descriptions. Consumption is rather increase but still the amount of business passing is not sufficient to keep mills fully at work. The steel rail trade is rather irregular; and of the mills are full of business, while others have but the wouten on hand, and are anxious accordingly to secure orders. Buyen lots of 1000 tons and upwards have been placing their orders to currency. There is no immediate process. to \$49 per ton currency. There is no immediate prospect for all provement in the demand for iron rails at Philadelphia. There been some enquiry for this description of rails for some range. been some enquiry for this description of rails for some new road but the terms of payment are such as could not be entertially Prices of ir or rails ranged from \$33 to \$37 currency per to submills, according to quality. At Pittsburg the manufactured is mills, according to quality. At Pittsburg the manufactured is steel market is unchanged. The total production of anthrocien in Pennsylvania to March 17 this year amounted to 3,351.49 loss an increase of 1,081,563 tons in the corresponding period of 1870, but an increase of 1,081,563 tons this year. The total production bituminous coal in Pennsylvania to March 17 this year amounted to 528,117 tons, against 547,635 tons in the corresponding period. bituminous coat in Pennsylvania to Marca II into year angula to 528,117 tons, against 547,655 tons in the corresponding lead, 1876, showing a decrease of 19,518 tons this year. The morea of coal over the Pennsylvania railroad to March 14 this year angula to about 971,057 tons

REPORT FROM CORNWALL.

April 12.—The fact that while the official standards remained to April 12.—The fact that while the official scanniards remained elanged the current prices for tin during the past three med have ruled at a lower figure was made thoroughly evidence bolcouth account, when the sale of 203 tons of black tin left and only of 1079%, on the twelve weeks, and the dividend fell to only of 1073%, on the tweive weeks, and the dividend fell to \$\frac{1}{2}\$, average price realised was stated by Capt. Josiah to have been \$2\$, less than the average of the previous quarter, which made addition of \$650l\$. In the credital, tin having been sold as low as \$43 at But yet there is good hope of better times. Capt. Josiah will ge offer an opinion on mining again if tin does not improve by the sold as a state of the case as a transfer of the case of the year, a statement which shows the strength of his convictions, and the results of the working of the boring-machine are tory. It is self-ventilating character makes the driving of the loss levels a matter of comparative ease, and paves the way for another great work—the extension of the man-engine to the 314 fm less This is to be done in two years, and then the miners will be able go up and down by mechanical means a couple of thorsand fee which, so far as the labour is concerned, will convert the deepe mine in Cornwall into a comparatively shallow one. one of his persistent attacks on the coal merchants in geneal, at the Williams's in particular, but took very little by his mois since Sir Frederick Williams was present to defend himself, and the since Sir Freierick Williams was present to defend himself, and is firm had several other champions, who reminded Mr. Rale that is test of the value of a thing was not merely its price, but is quily in connection with its price. Mr. Rule has done good service, but is force of any man's arguments is always weighted when he appear in the character of a rival in trade. Nevertheless, there is no ream why coals should not be analysed and the price fixed accordingly. Mr. Rule had another hearty "pitch-in" at the meeting of the Cornwall Mining Institute, when he dealt with "the present mole of conducting Cornish mines, and the improvements needed test

of conducting Cornish mines, and the improvements needed has able us to contend with foreign competition." He was decided successful in some of his comments on the way in which casts successful in some of this comments on the way in which casebast companies are too frequently financially worked; and very little could be said against—and much in praise of—the principle is laid down for the management of mines generally. The difficilly would arise in putting his ideas into practice. It does not follow, however, that the appointment of one man to manage several oncerns must be a mistake. As to the statement that men should be paid properly there is no doubt whatever that Mr. Rule is in the country of the properly there is no doubt whatever that Mr. Rule is in the principle only a fair day's work should be accounted for a fair day and the fair and the fair and the fair day and the fair day accounted for a fair day and the fair day accounted for a fair day and the fair day accounted for a fair day and the fair day accounted for a fair day accounted for a fair day accounted fair day accounted for a fair day accounted for a fair day accounted for a fair day accounted fair day accounted for a fair day accounted for a fair day accounted fair day oe paid properly there is no donot whatever that Mr. Rale is interright, only a fair day's work should be secured for a fairday's way.

That miners should try their hand at smelting we have often devocated. Altogether there was nothing new in what Mr. Raleial
to say, but a good deal of it was very shrewilly put.

Mr. R. Symons, at the same meeting, dealt with the question
mining leases in a clear and practical manner. Buthe hardly weath
thoroughly into it as was to be desired. What is wanted is not
more review of terms but a change of conditions—a radical plan
more review of terms but a change of conditions—a radical plan
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mere revision of terms but a change of conditions-a radical refer Mr. Symons end reses the view that does should be paid out of posits only, for which we have again and again contended; and this really the only point worth fighting for. Fair compensions land destroyed, adequate rent for land occupied, liberal due of profits only—these are the three conditions of all true lease reference. course there are liberal landlords, like Lord Robartss and M Basset, under whom mines are as well off as if leases were so could but all mining men are familiar with instances to the contrary. There is no doubt that just now New Consols is one of the mi

prominent topics in mining circles, though there certainly are queters where it and its concerns excite very little interest. There is pears to be two very divergent elements in the discussion which now taking place, with a few traces of the existence of the midd term between them. According to one set of talkers and write the misfortunes of New Consols are all the fault of the director according to another the manager is alone responsible. It is a one here and there, apparently—if we had to judge solely by which is apparent on the surface—who can see that, although takes may have been made, both directors and manager have best to forward the respective views they entertained for the welfare of the mins. The directors have, somehow or other, inspice all the financial difficulties of the present dull time, continued create an enormous working plant, and to lay out the mise rule hitherto unknown in operations of such a character. Capit Pryor has been the most zealous advocate of the wet process treatment, in the face of an amount of latent opposition to their fanded notions, do not not prove the control of the control fangled notions, the amount of with the county can understand. As to the mistakes, course are inseparable from all understand. As to the miscuss, some conducted on such a rule; but really sufficient allowance is mismore that the company have been design with a principle of treatment which, though thoroughly sound itself, has through unfortunate circumstances never been associated. in this county hitherto with more than a scientific suc one fact alone is a very serious hindrance to the efficient operation of a company carrying on such an undertaking; and that, not such as undertaking and the same standing all this, and the avowedly experimental character of the same standing all this, and the avowedly experimental character of the same standing all this, and the avowedly experimental character of the same standing all this, and the avowedly experimental character of the same standing all this, and the avowedly experimental character of the same standing and the same standing a proceedings, matters should have been brought to the pointred really shows how thoroughly those concerned have had the integer of the undertaking at heart. Whatever comes of New Consists has been done there from which the county will be by in time to come; but it is to be hoped that those who have but the burden and heat of the day there will not lose their results. Nor is there any reason why they should if, instead of worse idle recriminations, all interested should unite to push forwar nterprise to that thorough success which, with judicious action, near at hand.

argyrite, a it the lode

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progrite, and stephanite, all embedded in chalybite (carbonate of pagyrite, and stephanite, and friable quartz. There is no doubt 10, with flooken, chlorite, and friable quartz. There is no doubt 10 in the lode is an essentially well defined silver-bearing lode. In at the lode is about 18 in, in width, and the "country" constorable for the production of the richest of minerals. Such is the sial for the production of the richest of minerals. Such is the stement of a friend of great experience who has lately visited the tement of a friend of great of thousands of pounds worth of silver has been included.

coil for the design of great experience who has lately visited the titement of a friend of great experience who has lately visited the titement of a friend of thousands of pounds worth of silver has been noise. Hundreds of the time among the bal girls, and not by Tare has been a strike, this time among the bal girls, and not by Tare has been a strike, this time among the bal girls, and not by warms of a scious character. The executive at West Seton repled on assimilating the hours of work on the copper floors to pled on assimilating the hours of work on the copper floors to pled on assimilating the hours of five. This they refused to say work until half-past five instead of five. This they refused to be work work in the present of five. This they refused to the younger ones went back, but the elder ones set day most of the younger ones went back, but the elder ones set day most of the younger ones went back, but the elder ones set day most of the younger ones went back, but the elder ones set day most of the younger ones went back, but the elder ones set day most of the younger ones went back, but the elder ones set day most of the younger ones went back, but the elder ones set day most of the younger ones went back, but the elder ones set day most of the younger ones went back, but the elder ones set day most of the younger ones went back, but the elder ones set day most of the younger ones went back, but the elder ones set day most of the younger ones went back, but the elder ones set day most of the younger ones went back, but the elder ones set day most of the younger ones went back, but the elder ones set day most of the younger ones went back, but the elder ones set day most of the younger ones went back, but the elder ones set day most of the younger ones went back, but the elder ones are day when the younger ones went back, but the elder ones are day when the younger ones went back and younger ones went back and younger ones went back as a section of the younger ones went back and younger ones went back

The point has fig point his little to do with mining matters, but it is really fig point his fittle to do with mining matters, but it is really to find that the good people who have been assuming that mining promiting the mining promiting that the first point accordingly, have at length found out their error, and learnt found it are not superior to Manchester, which requires an Order at Turo is not superior to Manchester, which requires an Order to Turo is not superior to Manchester, which requires an Order to Gunedite field that object. The Order, it is said, is likely to be a Camell to effect that object. The Order, it is said, is likely to be a Camell to effect that object. The Order, it is said, is likely to be a Camell to effect that object. The Order, which is likely to be a Camell to effect that object. The Order, which is a city it would take a facility of the order of ery rear rank indeed.

and what is in a name?
The Corawali Minerals Railway Company will possibly find it measary to be off with the old loves before it is on with the new. Reseations are in progress for its transfer to the Great Western talkey Company, but the shareholders of the Nawanay and the shareholders of the Sanahala and the shareholders of the shareholders of the Sanahala and the shareholders of the sh passing to be a special on a reason of the Newquay and Cornlaw Company, but the shareholders of the Newquay and Cornlaw Company, but the shareholders of the Newquay and Cornlaw Company, but the shareholders of the Newquay are by no means
all with the status quo so far as they are concerned, and have
limestings at St. Ausiell. At the Newquay and Cornwall Junclimesting Mr. E. Carlyon presided, and explained the questions
gas between this company and the Cornwall Minerals Company,
a sum discussion the foilowing resolution was passed:—"That
meeting be again adjourned, for the purpose of getting further
icular respecting the claims of this company against the CornMinerals R illway Company for arrears of rent; and that in the
atima the accelury be requested to communicate with the Great Minerals R illway Company for arrears of rent; and that in the stims the secretary be requested to communicate with the Great tem Company, expressing the disatisfaction which the shares of this company feel at the non-payment of the rent due (the Cornwall Minerals Railway Company." At the Lostwithiel Fawey meeting Mr. W. Lowry, of Fowey, was the Chairman, tate i that in accordance with instructions given to the combinious position and petition had been presented against the Cornwall rals Railway Bill now before Parliament. The directors had, seeding that day, passed a resolution consisting Mr. E. Chairman,

nerals Riilway Bill now before Parliament. The directors had, a meeting that day, passed a resolution appointing Mr. E. Carlyon, the firm of Carlyon and Stephens, solicitors, St. Austell, to act as siture on behalf of the company in the matter of the petition inst the Bill. The meeting approved of the action of the direct, and confirmed what had been done, afformation travels slowly in some parts of Cornwall. It is now real weeks since that the McKean drill was set to work by Capt. wis in West Maria and Fortescue, yet a mining authority in Cornhas this week been deploring that there are no accounts at the there are in accounts at the original parts of the successful trials appeared of the successful trials appeared or who is the maker. A report of the successful trials appeared he Mining Journal a month since.

TRADE OF THE TYNE AND WEAR.

April 11 .- There is little good news to report in connection with Coal and from Trades here. The quarterly meeting of the iron le was held on Tuesday, when there was a good attendance, pers are extremely cautious, but on the whole iron is more en-The foreign demand is becoming brisker, and a better and is expected, but as stocks are getting large it may still be ssary to reduce the make. The reduction in the wages of the ma miners comes into operation from April 2. This will afford the relief to the harassed coalowners, but it will seriously injure y of the miners, as they are only in many cases making three per week. In East Durham, however, at Ryhope, Silksworth, e colliers are doing well, most of them being engaged full The workmen employed at Thrickley Colliery, west of New-are now idle. The men refused to submit to a reduction of e, are now it.le. The men refused to submit to a reduction of ercent, in the Brockwell and Main coal seam unless the queswas submitted to the joint committee. A number of men en-ed in the Mandlin seam (steam coal), in Lord Durham's col-son the Wear, have received notices to leave. The Northumand colliery owners have intimated to the men that they will re a reduction of 15 per cent, in the wages of all the men em-el in hard coal works, and 10 per cent, in soft coal works, and fat they cannot afford to allow free houses and coals in the pret state of the trade. They are, however, willing to refer all these at to arbitration. Mr. Yorke, the stipendiary magistrate for the Shields, has been appointed local umpire, to sit with a joint mittee, and adjust any local difference that may arise in the umberland coal trade

xports of coal from the north-eastern ports foreign show a ble falling off in March, as compared with March, 1876. shipments foreign being 447,454 tons, against 481,095 tons last year, and coastwise there is a slight increase, the being 459,941 tons, against 453,152 tons in March, 1876. ort of Hall is not included in this statement, but the quantity d there is of trilling amount. There is, however, one hopeful in connection with the trade of the district—that is, the great import trade; this business is rapidly increasing. is of the import trade; this business is rapidly increasing, efficiency for the imports are mainly raw materials, and conference to find the Tyne in preference to Hull, as the vessels can eargoes of coal and coke for Spain, &c., and the ores are sent efficient and other inland parts by rail. The increase of this trade awerful argument in favour of the scheme for the further imment of the Tyne and the formation of more deep-water docks, I catting machines have now been tried at various places in listrict, and for a long period, but so far the trials have not crowned with success. The most persistent attempt to bring into use has been made at Hetton. At one time three of these use has been made at Hetton. At one time three of these were at work, two of Baird's machines, and one of Gillott y's, but at present only one machine (Baird's) is worked. ley's, but at present only one machine (Baird's) is worked, is not likely to be worked much longer, as the result is not ory. It is indeed at present costing more per ton to work nethod than by the ordinary system with hand labour. The achine is preferred here to the other. These machines cost I the average work done in eight hours is 27 yards in length, long 2 feet 9 inches under, the seam being 3 feet 10 inches in These muchines are worked at the present moment in , but in that case the seams are of considerable thickness, opinion is gaining ground here that coal cutting machines. pinion is gaining ground here that coal cutting machines prove profitable in these seams. Of course, the cost of hand of prove profitable in these seams. Of course, the cost of hand is much less at present than in 1873, which was an important

ention.
Caemical Trade has been very quiet, with the exception of

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and chemical Trade has been very quiet, with the exception or eaching powder, which has been in good demand, and increased tes have been asked and paid in many cases. As the entry important exhibition has been opened this week at South itels, promoted by the gas company there. The engineer to this sampany, Mr. J. W. Warner, has been very active in promoting it inventing new appliances to be worked by means of gas, and it is determined a short time ago to hold the exhibition, and to offer ven silver medals for competition to be open to all engineers in the ver medals for competition, to be open to all engineers in the The articles to be exhibited are divided into seven Angion. The articles to be exhibited are divided into seven a Prizes were awarded to the successful competitors in five classes on Tuesday evening. The others have not yet been lupon by the judges, who have had an arduous task, Mr. J. sen, analytical chemist, Newcastle, and Mr. W. Bennett, C.E., b. The exhibition has been very successful, having been

attended by large numbers of people, residents in the locality and from distant towns. The prizes awarded were—
CLASS 1.—Efficient, durable, and cheap portable stoves, for boiling, grilling, trying, &c., suitable for a mechanic's home. Silver medal. Mr. J. E. Prust, 78, Smallbrook street, Birmingham, for his domestic cooking stove, with one ring burner.
Price 28.

brook street, Birmingham, for his domestic cooking stove, with one ring burner. Price 28s.

CLASS 2.—Family cooking stoves. Silver medal. Messrs. John Wright and Sons, Birmingham, for their 53s family cooking stove, with their hot water boiler and oven. Price 11t. 5s. Capable of cooking for from 12 to 15 persons at a cost of threepence. The chief feature of the stove is that the heat is reflected from the bottom of the stove, and the waste heat is utilised for heating the oven, in which pustry and bread can be baked while the meat is being cooked. In this class Mr. J. Wynn, of Cheltenham, received honourable n ention for his excellent stove, Price 8t. 10s.

CLASS 3.—Gas baths. Silver Medal. Mr. Charles Wilson, 132, Woodhouse-lane, Leeds, for his 7t. 10s. bath, heated by gas, free from smoke or smell, and capable of heating 29 gallons of water in about 30 minutes.

CLASS 4.—Closed apparatus for heating halls, small conservatories, &c. Silver medal. John Wright and Sons, Birmingham, for their two specimens of hotwater apparatus, heated by gas and hot air, for conservatories, &c. CLASS 5.—Open gas fires. Silver medal. Messrs, B. Leoni and Co., London, for their small tubular-shaped calorifero. Price 2t. 5s. Suitable for offices, halls, or small rooms.

CLASS 6.—Gas-engines. Two competitors.

mail rooms. CLASS 6.—Gas-engines. Two competitors. CLASS 7. Fancy articles, including lace singers, coffee roasters, &c.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

April 12.-Very little change has taken place in the state of trade April 12.—Very little change has taken place in the state of trade during the past week in what may be termed the Midland coal field. Up to the present time there has been a fair amount of business done with London, but there are now symptoms of a decline, as is usual when summer approaches. Taking the quarter ending March last, however, there has been a marked decline in the consumption as compared with the same period of last year, thus dispelling the views of the late Royal Commission, that consumption would increase pair many with the inverse of population. Prices pering the views of the late Royal Commission, that consumption would increase pari passu with the increase of population. Prices, too, have been as low as in 1870 and 1871, and it is to be feared will go down still lower. As an illustration of the state of the trade, and what it is expected to be, it may be stated that the Boythorpe Colliery Company, whose pits are close to Chesterfield, have just given those in their employ, consisting of 300 men and boys, a fortnight's notice to leave, having decided to set the colliery down for a few months, in consequence of the depressed state of trade for a few months, in consequence of the depressed state of trade and the low prices prevailing. Like many others in the district, the Boythorpe Company have not been working much more than half time for several months past. There is likely to be a little than half time for several months past. There is likely to be a little more doing in steam coal, but the prospects of the summer trade are anything but cheering. At the lead mines there does not appear to be much signs of activity, excepting, perhaps, in one or two instances. Lead mining, for some reason or other, does not progress in Derbyshire, although it is the county where lead mining has been, in all probability, the longest carried on, the principal centre of the trade at the present time, Wirksworth, being an old Roman town. There are not many ironstone mines in the county, a good deal of the ore being got in connection with the coal measures. What is raised, however, is insufficient for the requirements of the furnaces, so that a large tonnage continues to be imported from Northamptonshire, which is used along with the local ore. The iron trade is much as it has been for some weeks; most of the foundries are, favourably off for business, whilst the few mills in the county have been kept tolerably well going. The erecting of the new plant works at Derby is causing the building of a very large number of houses in the town, and at Litchurch, which joins; so that Derby is becoming a very important place indeed.

the new plant works at Derby is causing the building of a very large number of houses in the town, and at Litchurch, which joins; so that Derby is becoming a very important place indeed.

Most of the Sheffield trades are far from being brisk, and complaints are pretty general as to the stagnation which exists. The mills engaged on plates have been running full time, there being a very fair demand for those for ships and boilers. Iron rails do not meet with much enquiry, whilst there appears to be a decline with respect to the output of those made of Bessemer. The engineering works are not so busy as they were a short time since, whilst the foundries have been working very well since the commencement of the year. Very little business is being done with America in cutlery or other goods; but, on the other hand, a steady trade is being carried on in edge tools and implements with our colonies. In the South Yorkshire district the ironworks are in a tolerably healthy state, there being an average production of pig, whilst the foundries are fully employed. Several of the collieries are rather better off than they have been, many now working five days a week. A fair tonnage of Silkstone has been passed on to the Great Northern from London during the week, whilst there has been a rather better enquiry for steam qualities. A good deal of smudge is now being used for converting into coke, of which a large quantity is now being urned out for the use of the blast furnaces of North Lincolnshire and some parts of Derbyshire.

A new railway connecting London with the South Yorkshire coal field is again proposed. It would go from Sutton (on the Great Northern) to the Manchester. Sheffield, and Lincolnshire Railway

field is again proposed. It would go from Sutton (on the Great Northern) to the Manchester, Sheffield, and Lincolnshire Railway at Mexbro'. The line would be an important and valuable one, but at Mexbro'. The line would be an important and valuable one, but would doubtless meet with an amount of opposition, which has been the case on two or three previous occasions, that would be likely to

defeat it.

At the Stafford Main Colliery, about a couple of miles from Barnsley, 300 men and boys have received notices, which will expire on the 19th inst., to cease work, the owners having determined to widen the shaft. The work will occupy about six months.

The strike at the Darfield Main Colliery continues, the men receiving the usual allowance from the Association, besides going round collecting money and provisions. The owners state that the men have been lessiving for work in some places 3s, per score more men have been receiving for work in some places 3s. per score more men have been eceiving for work in some places 3s, per score more than is paid by other firms working the same seam, and which is harder to bring down than at Darfield. The rise was given when the pits were opened out, after being flooded for a long time owing to a fire, and when there were some difficulties to contend with; these, however, have been cleared away, but the men consider that once having received the money it ought to be continued. About 50 men are now employed in keeping the roads and airways in an efficient state, and it is said by the owners that they are now losing less money than they did when they had all their men at work.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

April 12.—Perhaps the state of the iron industry presents a more satisfactory appearance than of late. The news that an American order—though not of large dimensions—has been obtained by this country, although it has not been lodged in this district, cannot but be looked upon as extremely gratifying, seeing the hostile tariffs British ironmasters have to contend against. During the week large clearances have been made from the ports of this district, prinlarge clearances have been made from the ports of this district, principally of rails. Sweden and Denmark continue customers. An Australian rail order is being worked out, and there is a talk of more orders for our North American dependencies. A large parcel of iron has been sent to the South of Russia. A few small clearances of bar-iron have been made to the Continent, and if anything this department shows a slight improvement. Pigs are unchanged. Prices for finished iron are exceedingly low, and some of the rail orders which have been received are said to return no profit to masters, who prefer to work at a slight loss to closing their establishments altogether. As usual, a fair amount of business is doing blishments altogether. As usual, a fair amount of business is doing at the steelworks. There has been a dispute at the Panteg Works, but the men have now consented to go to work at a reduction. Tin-plates are very little changed. Prices appear to be getting firmer. The restriction in make is still maintained, most of the

Next, to refer to the coal industry. Very little of a satisfactory ature can be said. Shipments have during the week fallen off to nature can be said. nature can be said. Shipments have during the week latter of to a slight extent. Prices are unchanged, and freights are also low. A fair demand for steam qualities exists, but for house coals the enquiry has rather declined. Very little is doing in patent fuel. Notices to terminate contracts are still more frequent than desirable. At the Nant-y-Glo and Blaina Collieries notices were posted, stating that contracts will cease at the end of the present week. Should this be strictly carried out, about 2000 men will be affected, but it

is believed that it is desired to effect a reduction in wages.

At last the award of the South Wales Conciliation Board has ap-

peared. It fixes the wages still at the minimum standard—a result which was universally expected, for no one thought a rise would be the result of the investigations of the accountants. In fact, their examination of the masters' books show that the selling prices of coal for the half-year ending Dec. 31 last show a falling off compared

coal for the nair-year ending Dec. 31 last show a latting off compared with the previous half-year.

The property of the Brynnawr Coal and Iron Company, which has been wound up under the Companies Act, is announced to be sold by public tender on the 17th. The property is valuable and extensive, and comprises the Clydach Ironworks and the Miffram and Tillery Collieries, and is situate at Llanelly and Aberystwith. The property is well provided with rail-way accommodation.

A layer questing of collieries has been held in the Rhundla Valley.

A large meeting of colliers has been held in the Rhondda Valley opromulgate the Union, the members of which have greatly fallen If of late, having been reduced to about one-eighth of what they were some 18 months ago. A resolution in favour of joining the Union was passed, and Mr. Halliday is to be invited to address

It is believed that the dispute between employers and employed

It is believed that the dispute between employers and employed at Cwmpennar Collieries, Mountain Ash, with respect to the introduction of the double-shift system, will be settled amicably before the notices to terminate contracts have expired.

An important application has been made to the Railway Commissioners by the Victoria Iron and Coal Company, who are the lesses of a colliery at Ynysgeinon, Glamorganshire. The applicants asked the Commissioners to make an order compelling the respondents, the Neath and Brecon Railway Company and the Midland Railway Company, to give the greater railway facilities. The applicants wanted their mineral traffic conveyed to Swansea by a shorter and more continuous route. The Commissioners grant-d the application. The enquiry as to the death of a man who was killed by an explosion of gas at the Robbing Mine Pit, Cyfartha, has been concluded. The jury found that deceased was killed by an explosion of gas, and added that they considered a competent man should have been employed to examine the works before the men went in, or the owners have "placed a door in such a place before the explosion occurred to direct the the air in the manner they have done since."

They believed if these things had been done the explosion would not They believed if these things had been done the explosion would not occurred

have occurred.

At the Troedyrhiw Colliery No. 3 pit in the Rhondda Valley, belonging to Messrs. James Thomas and Co., a serious inundation occurred yesterday evening resulting in the imprisonment of 14 men and boys, 10 of whom will, it is feared, be sacrificed. Upon the rescuing party descending the pit, which is 92 yards deep, it was found that the whole of the workings to within a few hundred yards of the bottom of the shaft were filled with water to the roof, but faint knocking being heard through the solid estimated 12 yards thick, driving was at once commenced, the imprisoned men at the same time working for a connection. By four o'clock on Thursday morning the pares were within speaking distance, and two hours afterwards they holed, the result being a loud explosion for the escape of the air which had fortunately been shut in and compressed by the water—it was no doubt the compressed air that enabled the by the water—it was no doubt the compressed air that enabled the men to work until the opening was effected. Morgan, the hardest worker of the imprisoned five, was unhappily killed by the blow of worker or the imprisoned five, was unnapply killed by the blow or air, but the four others were rescued, and are now progressing. Another party of nine is imprisoned at another place, and they are driving for them with all speed, and as faint knocking is still heard it is hoped that some of them at least may be got out alive. Mr. Galloway, the Government Inspector, and the various coalowners and mining engineers in the neighbourhood are present to render all the aid in their power.

A meeting of the Newport Alexandra Dock Company has been held the the Lordon of these under the presidence of Lord Tradenter. The

at the London offices, under the presidency of Lord Tredegar. The meeting was held for the purpose of raising the remainder of the unissued capital authorised by the Alexandra (Newport) Dock Act of 1865, 1888, and 1876. Resolutions were passed inaccordance with this, and in the course of the proceedings the future of the dock was benefully speken of was hopefully spoken of.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

April 12 .- The Coal Trade of both North and South Stafford-April 12.—The Coal Trade of both North and South Staffordshire is at a low ebb, the demand as well for ironmaking as for the pottery and the hardware making requirements being much within the capabilities of the pits. The demand for pig-iron has fallen off in both districts, with the result that few furnaces are blowing their full complement of tuyeres. Mills and forges which did not begin last week have re-started this week with but little accumulation of orders received during the Easter week or since. Nor will the orders given out to-day in Birmingham or yesterday in Wolverhampton at the quarterly meetings result in much improvement upon the condition of things here described, but there was at those meetings a pretty confident hope that, as the quarter advances there will be a

pretty confident hope that as the quarter advances there will be a steady improvement.

This view was not, however, universal, and the fear that the deand the fear that the demand may be no better is leading to the making of preparations by some ironmaking firms to stop their works wholly or in part. This is notably the case with Messrs. G. B. Thorneyc.oft and Co., of Wolverhampton. To their chief employees at their two finished ironworks in that town, and at their colliery near to Bilston, they have given notice to terminate contracts at Midsummer, and if before that date trade should not get better they will then give the customary fortnight's notice to their coversities. customary fortnight's notice to their operatives.

customary fortnight's notice to their operatives.

The unprofitableness of ironmaking in this district is making it self manifest in the balance sheets of some of the joint-stock companies and in the preparations for winding up on the part of others. Nearly 20,000, has been lost by the Storr Valley Ironand Coal Company, at Albion, in the past two years, and a petition for winding up will be heard in the Court of Chancery by the Moster of the Rolls on Saturday. The shareholders are some wealthy Munchester capitalists, who a few years back bought the property from Messrs. Phillip Williums and Co., for somewhat over 100,00%: 60,000%, was paid down, and debentures were given for the remain ler. A batch paid down, and debentures were given for the remain ler. A batch of debentures is now falling due. The shares are of 20%, and 12% has been already paid. There have been heavy outlays on furnaces and collieries since the property has passed into the hands of its present proprietors.

sent proprietors.

The meeting of the Chilington Iron Compuny in Wolverhampton, on Saturday, passed off satisfactorily, considering that the loss has been 7500% upon the year, even after the directors and managing directors have given back 1700% of their yearly allowance. Mr. G. J. Barker is now to be the chairman of the company, and his brother—Mr. Thomas Barker—is to be manager at 200% a year, and the directors' remuneration is to be increased from 800% to 1000% a year, thereby enabling the board to recognise the services of the chairman, who had for five years been joint managing director with his brother, also at 2000%. In this way the company will save 1800% a year in managerial charges. The Brothers Barker hold between them about one-third of the company's stock.

one-third of the company's stock,

Shares of the last-mentioned company are firmly offere lat 4l., but without bu iness being done. John Baguall and Sons shares are on offer at 33, without securing purchasers. The 20t. paid-up shares of the Aldridge Colliery Company are in request at 23t, and a desare taking place at 29t, whilst for the Sandwell 10t. shares 21t, is still being got. Mil-Cannock Colliery shares also stand well in the market, the 20t. shares (10t, paid) being offered at not under 5t, premium. premium.

I am afraid that too much is being made of the orler which has

I am afraid that too much is being made of the or ler which has been secured from America for cotton ties, and suspect that 4000 tons which have fallen to South Staffordshire, to Runcom, and to Manchester represent the bulk, if not, indeed, the whole of the order.

At Birmingham several objects of interest more or less remotely connected with ironworking claimed the attention of the Quarterly Meeting. Among these may be mentioned Pumphray's putent forty-fold writer, for multiplying copies of writings, drawings, sketchings, &c., with the aid of an ordinary copying press; samples of T. H. P. Dennis and Company's patent Fullway high-pressure valves, for steam, water, or gas, in which friction and possibility of leakage are reduced to a minimum; and a working model of Mr. Worthington's fog signal apparatus or machine for hying signals on the rails in foggy weather, which is thus described:—"At the first look it reminds one of the star-fish, the principal part of the machine being a

number of radial arms, which are bent at an angle of 135°, and which can be incoeased in number according to the available space. Each radial arm carries an ordinary detonating signal, to each of which is attached a spring which serves the purpose of drawing away from the rail the exploded case. On the upper part of each arm is a small fitting, which, when the machine is turned, is thrown outwards by a cam arrangement, thus causing the signal which is fastened by a wire shauk, to lie upon the rail until it is exploded. These radial arms are worked by a horizontal lever, fixed on a pivot, which is moved by a wire from the signal box, and by a counter balance weight. Projecting from the pivot is a fixed finger, and hinged to this finger is a sliding bar, which passes along a groove in the lever, and works at the other extremity into a ratchet wheel. The number of teeth in this wheel correspond with the number of radial arms, and both are mounted on the same vertical axie. When the wire is pulled by the signalman, the wheel is drawn away from the rail; but when he releases his hold the apparatus goes back into position, and at the same time a detonating signal is shot up by one of the arms and placed securely on the rail by means of the cam arrangement before mentioned. All that is needed, therefore, when the machine has been supplied with the ordinary fog signals is that the signalman shall pull his lever whenever he wants to pull a signal off the line, and let it go back when he wants to put one on."

THE COAL FIELDS OF SOUTH AFRICA.—We are glad to learn that the Government has honoured our esteemed correspondent, Mr. F. W. North F.G.S., of Dudley, with an appointment to inspect and report officially upon the coal fields of Cape Colony, Cape of Good Hope. Mr. North enjoys a high reputation in Stafford-hire as a mining engineer of sound practical and scientific knowledge, and there can be no doubt that he will be able to offer suggestions as to the best method of developing the deposits, which will be of much value in facilitating the supply of cheap fuel in the Colony. He is expected to return about the end of the year, when we hope to be able to give an outline of the result of his enquiries.

REPORT FROM THE FOREST OF DEAN.

April 12.-The general opinion of this district is, as far as we have April 12.—The general opinion of this district is as far as we have been able to gather it, that matters of trade, instead of presenting further improvement, are decidedly going worse. We are afraid that this general feeling and belief represent too truly the real characteristics of the present aspects of Forest business. The coal pits are only partially employed, the men working some days and playing others (as the local phraseology has it). Prices, too, are said to be very low on account of the severe competition in the market; and such heing the case, the margin of prefits is reduced. pits are only partially employed, the men working some days and playing others (as the local phraseology has it). Prices, too, are said to be very low on account of the severe competition in the market; and such being the case, the margin of profits is reduced to a minimum, profits, in fact, in some cases are said to be altogether out of the question. There can be no question but that the times are exceptionally trying to proprietors, as well as to workmen. We referred last week to the case of the iren being put on short contracts at Lydney Tin plate Works, belonging to Messrs. Thomas. They afterwards put a notice to the same effect at their works at Lydneyock, which will expire on the 30th inst., a week after the notice will expire at Lydney. All present contracts cases and determine on those respective dates. And it is understood that a reduction of wages will then have to be submitted to by the men, or that the works will be stopped in consequence. Such is the present belief. The men—or great numbers of them—tak of leaving the neighbourhood, but where can they better themselves? Are they not in danger of jumping out of the frying pan into the fire? Time, however, will alone reveal the outcome of the present and prospective ordeal. Trade it also stack at Messrs. Russell and Co's, works at Lydnovok. Yet amidst all the gloom of present surroundings there are rumours of re-open matcho pit, near Lydnovok which we hope is a correct report, as it would in all probability lead would at the same time relieve some others is about to re-open Matcho pit, near Lydnovok which we hope is a correct report, as it would in all probability lead to water. And now we have mentioned three deep workings for a long time past, that an experiment was tried upon (or within, rather) a suspected neighbouring collery, which seems to fully satisfy the aggrieved proprietors of a pit of excellent works, and the proprietor was a premised with the great profit of which is the proprietor, A cask of vitriol (or some other liquid) was conveyed i

IMPROVED WOOD PAVEMENT.

IMPROVED WOOD PAVEMENT.

The idea of constructing a rondway of cubes of wood laid upon sand is one which has certainly the advantage of being unlikely to involve ary disputes as to the priority of invention with anyone who has had any experience in practical road making, and as sand will undoubtedly allow water to percolate through it the inventor may agree pate a success, if experience prove that no inconvenience prises from dishing, and that sharp sand will under heavy traffic maintain that even surface which is essential to the durability of any system of wood pavement whatever. The inventor of the porous foundation pavement, at present being introduced by Mr. Josiah J. Merriman, of Poet's Corner, Westminster, contends that most, if not all, of the systems now employed in London rest upon a false principle or theory. In constructing the new roadway the first step is to excavate and level the ordinary roadway to the required depth and dip. When that roadway or bottom has been so well made it is covered over with a bed of clean sharp sand 6 in, deep. Upon this sand is laid a series of rows of wooden blocks, or cubes, on end across the street. Between each row of these wooden blocks, or cubes, are driven wedges 1 in, in thickness, and when a sufficient number of these blocks and wedges are laid to hold the sand firmly the latter are driven below the surface of the roadway to the depth of 3 or 4 in, below the bottom of the level of the blocks into the bed of sand. The effect of this wedging compresses the sand, it is said, to something nearly approaching the hardness of sandstone, without destroying in any material degree its elasticity or power of absorption, and fixes the wooden blocks, or cubes, much more firmly than they can be fixed by any other process.

sorption, and fixes the wooden blocks, or cubes, much more firmly than they can be fixed by any other process.

It is rather amusing to notice the points of controversy between the advocates of rival systems of wood pavement. An anonymous author advocating one system complains that another system, which he names, is unduly extravagant or costly. If, says this author, a bed of concrete 6 inches deep is laid you will get a basis which is absolutely impenetrable, "even as plaster wall, and hard as a rock," and to lay upon this impenetrable concrete a layer of asphalte is a useless exaggeration of the necessary cost of wood pavement in any case. The same author, mercilessly assailing a rival system, says it is evident "that if the concrete is impervious to water as well as the joints and the wood blocks no need is required of a layer of asphalte beneath the blocks." The inventor of the new system maintains that a pavement which has no elasticity whatever is a means of discomfort and injury to animals who have the stream of the comfort and injury to animals who have the stream of the comfort and injury to animals who have phalte beneath the blocks." The inventor of the new system maintains that a parement which has no elasticity whatever is a means of discomfort and injury to animals who have to draw vehicles over it, and very much diminishes their motive power. Another merit claimed for the new system is that the basis of compressed sand will be sufficiently hard to resist the distributed weight of the heaviest vehicle which may pass over it (as abundant proof under most trying circumstances in America shows), and it retains withal a slight—or it might be said an imperceptible—elasticity, which the horse with a load behind him alone can perhaps appreciate, but which experiments will also show enables him to draw with far greater ease over it. It is argued, truly enough, that wood fibres are elastic in over it. It is argued, truly enough, that wood fibres are elastic in themselves, and that the wear and tear of horseflesh is diminished by the natural tension of the fibre of that material, but this statement is only partially true of one system now somewhat extensivly laid down in London, for the endeavour of its patentee has been to

render wood as much like stone as possible, and first by hardening the wood, and then by laying it upon a concrete base, to get rid of that elasticity which as certainly increases the working power of the horse as it materially increases his comfort in working, and so far prolongs his days of usefulness to man.

NEW STONE-BREAKER.

Although the stone-breaker has become almost a daily necessity it is scarcely to be expected that it is so perfect as to be incapable of improvement. Well knowing this Mr. J. D. Simpson, of Buxton, has patented an invention which relates to that description of maand patented an invention which relates to that description or machinery or apparatus for breaking or reducing stones and other hard and brittle substances, in which the substances under treatment are operated upon between a stationary jaw and a moveable jaw, and it has reference to devices or appliances for withdrawing or opening the moveable jaw alternately with its closing action through the medium of the toggles. The invention consists essentially in drawing back the moveable jaw by the action of the pitman or eccentric. It may be carried out in a variety of ways, but the avanuals bersing It may be carried out in a variety of ways, but the examples herein-after given are arrangements which will be found convenient in

atter given are arrangements which will be found convenient in practice.

According to one modification Mr. Simpson mounts on a fixed centre carried by the framing a bell-crank lever, one arm of which is connected by a hook, link, or similar contrivance to the back of the moveable jaw, whilst the other arm of such lever carries a screw centre or knife edge or other pivot on the edge or extremity of which the lower part of the eccentric bar or pitman for operating the toggles rests. The pivot which is by preference mounted in a block fitted detachably in the end of the bell crank lever is made adjustable vertically, so that its edge or extremity may be placed adjustable vertically, so that its edge or extremity may be placed at the requisite height, and set nuts are provided for securing it in any adjusted position. In operating with the machine when the bar is elevated under the action of the eccentric so as to straighten the toggles and close the jaw, the pivot simply follows the bar in its rise without offering any impeliment to its motion; on the descent, however, of the bar by the continued motion of the eccentric, the pivot is decreased whereby the bell carrie, here is turned in the continued motion of the second continued motion o pivot is depressed, whereby the bell-crank lever is turned upon its centre and the jaw is drawn back or opened, to be again closed by a fresh half revolution of the shaft, and then again drawn back or reopened, and so on repeating the operations in succession during the

opened, and so on repeating the operations in succession during the working of the machine.

According to another modification the lower extremity of the eccentric bar or pitman carries a fixed centre, to which is attached one extremity of two sets of rods, the opposite extremities of which are respectively attached to the moveable jaw and to the framing of the machine. Each set of rods consists of two parts coupled together by compound nuts and right and left hand screws, so as to admit of their length being adjusted as required; and means of adjustment may also be provided if necessary at the outer extremities of the rods where they are attached to the moveable jaw and to the framing respectively, or at the outer extremity of one set only if preferred. respectively, or at the outer extremity of one set only if preferred. The apparatus may also be further modified in various ways, whilst still retaining the principle of utilising the action of the eccentric or pitman for drawing back the moveable jaw.

In the High Court of Justice-Chancery Division.

In the High Court of Justice—Chancery Division.

VICE-CHANGELIOR MALLINS.

IN THE MATTER OF THE BRENT MOOR CHINA-CLAY AND MICA WORKS COMPANY (LIMITED), AND

IN THE MATTER OF THE COMPANIES ACTS, 1863 AND 1867.

THE DIRECTORS of the ABOVE-NAMED COMPANY are required, on or before the 5th day of May, 1877, to SEND their NAMES and ADDESSES and the PARTICLLARS of their DEBTS or CLAIMS, and the names and addresses of their solicitors (if any) to ALFIED COTTON HARDER, of No. 2, Cowpers securit. Cornhill, in the City of London, public accountant, the Official Liquidator of the said company; and, if so required by notice in writing from the said Official Liquidator, are by their solicitors to COME IN and PROVE their said DEBTS or CLAIMS at the chambers of the Vice Chancellor Sir Richard Malins, at No. 3, Stone Buildings, Lincoln's Inn, in the county of Middlessex, at such time as shall be specified in such notice, or in default thereof they will be EXCLUDED from the BEXEFIT of any DISTRIBUTION made before such debts are proved.

ols are proved. uesday, the 15th day of May, 1977, at Twelve o'clock at noon, at the said cham-s, is appointed for hearing and adjudicating upon the debts and claims. ALFRED RAWLINSON, Chief Clerk. Dated this 9th day of April, 1977.

IN THE MATTER OF THE COMPANIES ACT, 1852, AND OF THE NEW ST. AGNES MINE COMPANY (LIMITED).

THE CREDITORS of the above-named company are REQUIRED, on or before the 19th day of April, 1877, TO SEED THEIR NAMES AND ADDRESSES, and the PAITICULARS OF THEIR DEBTS OR CLAIMS, to the Undersigned Voluntary Liquidator of the said Company, or, in default thereof, they will be EXCLUDED FROM THE BENEFIT OF ANY DISTRIBUTION made before such claims are sent in.

GEORGE STILL, Voluntary Liquidator.

35, Ethelburga House, 70 and 71, Bi-hopsgate-street Within,
London, E.C., April 10th, 1877.

MANAGER WANTED, for a GOLD MINE, in CENTRAL AMERICA. Must have a knowledge of Spanish, and the Treatment of Auriferous Ores. Age not to exceed 45.

Address, with copy only of testimonials as to character and experience, to "N.," care of Mr. G. Street, 30, Cornaill, E.C.

WANTED, a FIRST-CLASS FIRM of MINING ENGINEERS ANIED, A FIRST-ULASS FIRM of MINING ENGINEERS
TO SEND OUT A GENTLEMAN TO REPORT UPON SOME GOLD
AND SILVER MINES in CENTRAL AMERICA, with a view of forming a
company to work such mines. Only first-rate men will be dealt with, and applicants must give full particulars of experience, and references, &c. The proprietor
will defray all expenses connected with this report; and preference will be given
to a firm that could introduce parties to float the company hereafter.
Apply, by letter in first instance, to "F.A.S.," 195, Palmerston Buildings,
Old Broad-street, London.

WANTED, FORTY YARDS of 9 in. or 10 in. PUMPS, with bucket lift, working barrel, complete; also ONE HUNDRED YARDS bucket lift, working barrel, complete; also ONE HUNDRE n. or 9 in. PUMPS, with plunger, all complete, secondhand or nev te lowest price, and where seen, "Box 129," Post Office, Sheffield.

LEAD MINES IN BRECONSHIRE AND CARDIGANSHIRE.

THE ADVERTISER, a Gentleman owning the Leases of TWO SILVER LEAD MINES, is desirous of meeting with someone to JOIN HIM in WORKING THE SAME, with a view to forming them into a company, or working them privately.

All particulars will be given on application to "X. Y. Z.," Post Office, Dolgelley.

SILVER-LEAD MINE.

THE ADVERTISER has a VALUABLE SETT that can be proceed the ply by adit; lode now in adit end that will pay well, and the legunding into a high hill. The district is one of the best in Cornwall for mineral states. silver lead now at surface. There is also a large copper lode in the se GLAD to MEET with a GENTLEMAN to ASSIST in RAISING hould be GLAD to MEET with a GENTLEMAN to ASSIST in RAISING OMPANY. Reports and full particulars from "Engineer," 25, Fleet-street, London, E.C.

A MINING ENGINEER, holding Certificate of Competency, REQUIRES a SITUATION. Experienced in sinking and laying out of new work, and general management of collieries and ironstone mines. Age 30. Satisfactory references. atisfactory references.

Address, "M. E.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

REVENUE MINERAL COMPANY

(LIMITED).

The Mines are situated in the great silver-bearing belt of Colorado, U.S.A., and fully protected by United States Patents. ISSUE OF UNALLOTTED SHARES.

A LIMITED NUMBER of UNALLOTTED SHARES in the above company are OFFERED AT PAR. The Mines have been actively worked during the last four years, and a large quantity of rich silver ore is now ready for removal. The capital is required to complete the tunnel to the Revenue Lode, of which 650 feet has been driven out of about 800 feet, and for finishing the works.

For full particulars, last year's report, &c., apply to the Managers, to whom also applications for shares must be made before the 23rd instant.

38, Southampton Buildings, Chancery-lane, London, W.C.

THE

COMPANY LANGNESS MINING (LIMITED).

To be registered under the Companies (Isle of Man) Act, 1865, whereby the liability of each shareholder is limited to the amount of his shares.

Capital £45,000, in 15,000 Shares of £3 each

One-half the purchase money for the property is payable in single

NO PROMOTION MONEY TO BE PAID,

NO PROMOTION MONEY TO BE PAID.

PROVISIONAL DIRECTORS.

*THOMAS WRIGHT, Sunnyside Cottage, Douglas, Isle of Ma.

*WILLIAM TODHUNTER, Derby-square, Douglas, Isle of Ma.

*JOHN TAGGART, Malew-street, Castletown, Isle of Ma.

*WILLIAM J. FELL, Princes-street, Douglas, Isle of Ma.

*WILLIAM J. FELL, Princes-street, Douglas, Isle of Ma.

*THENRY NICHOLLS, Harris-terrace, Douglas, Isle of Ma.

*HENRY NICHOLLS, Harris-terrace, Douglas, Isle of Ma.

*These gentlemen are members of the Derbyhaven Trial Company, the tuelon.

HANKERS.

BANKERS.

BANK OF MONA, Douglas, Isle of Man, and Branches; and the CITY OF GLASGOW BANK, Glasgow. AUDITOR-To be elected by the shareholders, SECRETARY (pro tem) - M. PARKINSON.

46, ATHOL STREET, DOUGLAS, ISLE OF MAX.

PROSPECTUS.

PROSPECTUS.

This company has been formed to purchase and work the mines, wins, a of metal, and metallic ores and minerals within, under, and upon a crain of a tract of land situate in the parish of Maley. Isle of Man, belonging a prietary company called "The Derbyhaven Trial Company."

The said portion of land is about a mile in extent along the course of or Champion lode, and is part of the set held by Messes, William Tod Thomas Wright, and William Fell, under lease from the Crown for 21 was 5th April, 1876. It contains besides the said main lode a strong parallels both are intersected by numerous caunter lodes or cross courses, all more having outcrops of rich copper ore.

The main lode has an outcrop of ore 20 in, in thickness on the surface: it parallel lode (which underlies towards the main lode, and the latter work having outcrops of rich copper ore.

The main lode has an outcrop of ore 20 in, in thickness on the surface discoverial to the main lode, and the latter when the control of the country of the

their property until it gave indications in depth of becoming, with and more extensive operations, one of the most promising minescer the public.

In keeping with this common desire to prove the worth of the pringing it before the public, a trial shaft was commenced under the Warington Sunyth, Government Mining Engineer, and sunk by he adepth of about 13 fms. From this a cross-cut was driven to inte and 20-in, vein (as the two main parallel veins are called). In the preliminary work, it became evident to the proprietors, and to the agents who visited the property—for the mine had already galnet tion in the island, and attracted considerable attention from mining the property would, when a moderate depth was attained, be a 4 ductive mine of high percentage considerable attention from mining discoverer of the Devon Great Consols, a trial winzo was sunk on and the proprietors had the satisfaction of finding that the lode or and the proprietors had the satisfaction of finding that the lode are ruled in 43 tons per fathom if driven upon). It was hoped that the two lodes would be reached in this winze; but, unfortunately progress (although it is an excellent indication of the liveliness at the lode, a heavy feed of vein water was struck, and the workings to be stopped in the absence of adequate machinery for getting out will be seen, however, upon reference to the statements of the well gentlemen whose reports accompany this prospectus, the proprietor will be seen, however, upon reference to the statements of the well gentlemen whose reports accompany this prospectus, the proprietor will be seen, however, upon reference to the statements of the well gentlemen whose reports accompany this prospectus, the proprietor had not such as a such as a

DEAR SIR.—I have had the sample of ore which you sent me analysel. is a fair sample, you have found a very rich vein indeed, but I am faisil good to be true. It tests:—

24 breent, iron | 32 oper cent. sulphur 24 5 , copper | J. T. Alley, Wilnes Laws

32:0 per cent. sulphur
1:1 ,, slicate
J. T. ALLEN, Widnes, Lauce

224 by copper 245 ., copper J. T. 11

The following are from Mr. Norman Tate, of Liverpool, the well known deal analyst:—

Analytical Laboratory and School of Technical Chemistry.

Dear Sir.—I have not been able to complete analysis of minerals in timetwe you fully to day, but am been able to complete analysis of minerals in timetwe you fully to day, but am been able to tell you that both samples containing or Spere of copper. They are, in fact, samples of copper ore in which the copper sits sulphide. The mineral appears to be a mixture of sulphides of iron actesy with quartz. I can scarcely tell you the value now, but if you can get laid Swansea sale list it will tell you the present price for such copper or. I will I can learn the value between now and to morrow's post. Such ore is detile worth attention.

A. NOLMAN TATE,

P S.—No. 1 contains 23 8 per cent. copper.

No. 2—12 5 per cent.

No. 2—21 5 per cent.

No. 1—21 5 per cent.

Mr. James T. Alleu.

A few days afterwards Mr. Norman Tate wrote as follows to Mr. Alleus.

Analytical Laboratory and School of Technical Chemistry.

Tand 9, Hackin's Hey, Liverpool, Aug. 2, 33.

DEAR Sir.—In addition to the results I reported to you on the lathing. In So. 2, 31.0

The other constituents are iron and silica, with a very faint trace of areain also traces of silver. I do not know that I can add anything further. Is also traces of silver. I do not know that I can add anything further. Is also traces of silver. I do not know that I can add anything further. Is also T. Alleu, Esq.

In Spector's Office, Douglas, Isle of Man, March 2, 15.

Str.—The following is the result of examination of four samples oppered coined by very found the Doublewise of the service of the proportion of the properties of the samples of copper derived by very found the Doublewson Mining Comment for analysis:—

Jas. T. Allen, Esq. Inspector's Office, Douglas, Isle of Man, March 2,155
Sir.—The following is the result of examination of four samples of expense gived by me from the Derbyhaven Mining Company for analysis:

No. 1 contains 2.13 per cent. of coppers.

No. 2 242 279
No. 3 224 7
No. 4 224 7
JOHN F. TERRY.

JOHN F. TEI Government Inspector

The property is held under a lease from the Crown, dated June 1, 1856,

whatsoever kind, and the company have the right under the iss minerals under Castletown Bay to a distance of about haif a miler The Importance of this concession will be seen when it is stated it west veins have been traced across Castletown Bay, and it is a the neighbourhood that the Sandwich Bee and Boe Norris rocks, which royalty, and are to be seen at low water spring tides, are full of ore Traces of ancient mining have been found on Lungues, and at "the Smelt House," on the road from Derbyhaven to Langues, as a smell through the sandhidis have been discovered to be beap of scorie and refuse from this place has been imperfect in character, as is shown by the larg copper, lead, manganese, &c., still remaining in these heaps of ref. It is expected that the purchase of adequate machinery for devel and for dressing purposes, will not absorb, with the purchase not have another the successible by good roads communicating with an excellent site for dressing floors, which will be so situated as only a moderate outlay, of the recurring tides being utilised for wax Languess Mine is accessible by good roads communicating with the amount, and the Railway Station at Ballasalla. It is bounded Bay on the west, with easy access to the port of Castletown, and to perations are carried on is admirably adapted, and may be easily for harbour purposes. At its northern end, however, it is provide best sheltered harbours in the United Kingdom—viz., Derbyl into which large vessels frequently run for shelter in prevailing facility is thus afforded for the cheap, speedy, and conomic contamination and material to and from the mine.

So valuable are the discoveries made, and so promising does the as depth is attained, that nothing but the absolute necessity of a lower the development of the mine and the obtaining rich returns has induced the vendors to place the property before the public.

The Memorandum of Agreement and plan of ground may be instructed the vendors to place the property before the public.

Articles of Association, with other impermation, of the company, 46, Athol street, Douglas, Isle of Man.

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INES:

MAPS OF ROISET ze 40 by countie

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as of becoming shareholders are particularly requested to visits for themselves the genuineness of the investment.

The for themselves the genuineness of the investment.

The formal property of the sum of £10,000, of which feet he mine to this company for the sum of £10,000, of which din shares.

The provision that the purchasers are to pay all the current alors in working the mine from Feb. 1, 1877.

The provision that the purchasers are to pay all the current alors in working the mine from Feb. 1, 1877.

The provision that the current accompanying the prospectus, the share to the company's credit, to the Bank of post of 194, per share to the company's credit, to the Bank of the Man, or its Branches, to the City of Glasgow Bank, Glassof Man, or its Branches, to the City of Glasgow Bank, Glassof Man, or its Branches, to the City of Glasgow Bank, Glassof Man, or the final provision that the provision that the company, 46, Athol-

ARKINSON, at the late of Man. Isle of Man. bares will be made according to priorty of application.

REPORTS ON THE MINE.

REPORTS ON THE MINE.

Report by WALTER EDDY, Esq., and Captain WILLIAM KITTO.

To the Directors of the Derbyhaven Mining Company.

To the Directors of the Derbyhaven Mining Company.

To the Directors of the Derbyhaven Mining Company.

We made a careful examination of this mineral property, both examination of the surface of the constitution of the district is rather curious and interesting. It is slogled formatione, conglomerate, mountain limestone, and elay-slate of different being in this part a cover or cap upon the clay-slate (or site of the constitution of the district is rather curious and interesting. It is slogled formatione, conglomerate, mountain limestone, and elay-slate of different being in this part a cover or cap upon the clay-slate (or site former being in this part a cover or cap upon the clay-slate (or site of the constitution) and interesting of the constitution of the district of the constitution

ged or disturbed by the trap dykes, the latter running nearly morkings have been made on what, for distinction, we will call help is from 3 ft. to 5 ft. wide. Several trial holes were first made one of which a blast was put in the lode whilst we were there, rom 5 to 6 cwts. of good copper ore. Theore is of unusually good g from 20 to 25 per cent. of metallic copper. So has been sunk perpendicularly outside the lode to a depth of out cross out put out from the bottom to intersect the lode, which ye slate below the conglomerate. The lode was driven upon here and a sump put down in it to a depth of 24 yards. The stratum site, and the lode maintains its full width of from 3 feet to 5 feet, in it; and in our judgement it is altogether of a most promising ing highly productive in depth.

It you are in possession of a very fine mineral property here, and as are prosecuted in depth, you will have a good and profitable with the depth with adventers the distributions.

that it might with advantage be divided into two or three promising nature of the present trials, we think that a large met with at the junction of the limestone with the clay slate, oximity to the present workings. The situation possesses greated working, the strata and lode fairly easy to drive in, and communication near at hand. The lodes are not far sepainer, and may be intersected with great advantage from the onest.

ened. WALTER EDDY, Mineral Surveyor, Fron, Llangollen, N.W. WILLIAM KITTO, Manager of the Foxdale Mines, Isle of Man.

Mr. Josiah H. Hitchins' Report.

erred to in the prospectus, Mr. Josiah H. Hitchins, the well-ner, says:— light since I inspected this mining property; having over and referred to in the prospectus, Mr. Josiah H. Hitchins, the wellagineer, says: —

ratinght since I inspected this mining property; having over and

the property of the prope

tion, again and again, of all the circumstances in connection with use no reason for wishing to retract my advice as to opening out in the way explained—that is to say, by sinking a trial winze to be the circumstance, in fine present bottom level there is a lode producing good with. What I have advised I would do myself if I had/the mine, money for it. Moreover, I cannot refrain from saying (taking into account) that my opinion is that the probabilities prepondent the successful issue of this mine, in proof of which I take an

CAPTAIN LLOYD'S REPORT.

CAPTAIN LLOYD'S REPORT.

who have visited the property for inspection purposes was Capt.

manager of the Harlech Mines, North Wales, who in reporting
enerally, and that portion of it to which some of the early exploraylaven Company were confined, says:—

at part of the sett where operations have been commenced five
aversing the sett within a space of less than 200 yards. Four of
doubth parallel lodes, with an underlay worth from 18 in. to 24 in.

the other is a cross-course running nearly east and west, so that
ter four, and forms a junction with each of them, which is a very
tion, and will most likely add to the richness of the four parallel
picked up from the surface at a point where the cross-lode forms
one of the north and south parallel lodes a large stone of rich

n a few more remarks respecting the four lodes running parallel orth and south, commencing with the western lode, which I will is a strong well-defined lode, containing spar, gossan, clay, and copper ore. No. 2 lode is within 9 fms. of No. 1, and is a fine-I could not examine it as well as I would have wished owing to be. To all appearance, however, it contains similar vein stuff and ere. No. 3 is a fine looking strong lode, running within 10 fms. It contains similar matrix to No. 1, and very strong ribs of rich

nest easterly, is a very strong, masterly, well-defined lode, about an straight smooth walls or cheeks, and containing, besides very erich copper ore of several inches wide, gossan of a light-brown carbonate of iron, spar, and clay, all of which are more or less to opper ore. This must be a very valuable lode indeed, and I due an immense wealth of ore when a proper depth is attained, sideration the extent of the sett, the number and richness of the mity to one another, and the facilities offered for working them ores, I have no doubt in my own mind that with a moderate y expended the Langness, Copper Mine cannot fail to be a great

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JOHN BARRAS, Secretary.

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APTAIN ABSALOM FRANCIS SUNING AGENT, ENGINEER, AND SURVEYOR GOGINAN, ABERYSTWITH,

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall,

N the MATTER of the COMPANIES ACT, 1862, and of the EAST WHEAL BASSET MINING COMPANY.—By an Order, made by His Honor the Vice-Warden of the Stannaries, in the said Matter, dated the 10th day of April instant, on the Petition of George Houghton Arnall, of Redruth, within the said Stannaries, timber merchant, a shareholder, and claiming to be also a creditor of the said company, IT WAS ORDERED that the said East Wheal Basset Mining Company shoul the WOUND-UP by this Court under the provisions of the Companies Act, 1862.

HODGE, HOCKIN, AND MARRACK, Truro Dated Truro, April 11, 1877. (Solicitors for the said Petitioners).

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the EAST WHEAL BASSET MINING COMPANY.—The Vice-Warden has, by an Order made in the above Matter, bearing date the 10th day of April instant, APPOINTED JOHN HENRY HAMLEY, of Truro, within the said Stannaries, an Officer of the said Court, to be absolutely the OFFICIAL LIQUIDATOR of the above-named company.

Dated Registrar's Office, Truro, April 11th, 1877.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the EAST WHEAL BASSET MINING COMPANY.—Notice is hereby given, that ALL CREDITORS of the above-named company are required, on or before the 21st day of April instant, to SEND in their NAMES and ADDRESSES, and the AMOUNTS and PARTICULARS of their BEVERAL CLAIMS, to JOHN HENRY HAMLEY, the Official Liquidator of the said company, at the Stannaries Court Office, in Truro, within the said Stannaries.

PREDERICK MARSHALL, Registrar.

Dated Registrar's Office, Truro, April 11th, 1877.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

In the MATTER of the COMPANIES ACTS, 1862 and 1867, and of the NEW CHIVERTON MINING COMPANY (LIMITED).—Notice is hereby given, that a PETITION for the WINDING-UP of the above named company by the Court was, on the 7th day of April instant, presented to the Vice-Warden of the Stannaries, by William Havey, Henry Whitford, William West, within the said Stannaries, ageneral merchants, under the style or firm of "Harvey and Co." claiming to be creditors of the said ocompany, and that the sail petition is directed to be heard before the Vice-Warden at the Law Institution, Chancery lane, London, on Monday, the 23rd day of April instant, at half-past Three o'clock in the afternoon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioners, their solicitors, or their agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smirn, Esq. Secretary of the Vice-Warden, Turo.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same from the petitioners, their solicitors, or their agents, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition; must be filed at the Registrar's Office, Truro, on or before the 19th day of April instant, and notice thereof must at the same time be given to the petitioner, their solicitors, or their agents.

HODGE, HOCKIN, AND MARRACK, Truro, Cornwall

and notice thereof must at the same time be given to the petitioners, their solitors, or their agents.

HODGE, HOCKIN, AND MARRACK, Truro, Cornwall (Solicitors for the Petitioners).

GREGORY, ROWCLIFFES, AND RAWLE, 1, Bedford-row, London (Agents of the said solicitors).

Dated Truro, the 11th day of April, 1877.

VALUABLE MINING PROPERTY FOR SALE.

THERE WILL BE SOLD, BY PUBLIC ROUP, within the Faculty Hail, Gasgow, on Wednesday, the 25th April, 1877, at Two o'clock afternoon, the PROPERTY of the GALWAY MINING COMPANY (LIMITED), in Liquidation, in One or more Lots, to sait purchasers.

The property consists of (1) the LEASES of about 1350 acres of LAND, containing TWO MINES, which have been partially worked and explored; (2) the BUILDINGS at the mines, consisting of blacksmiths' shops, workmen's house, stores, &c., (3) MACHINERY, consisting of horizontal ENGINE, water-wheel, pumping gear, &c.

The Liquidators are also PREPARED to SELL the STORES of WOOD, &c., and MINING UTENSILS.

The leases, inventory, and other papers may be seen in the hands of the subscriber, who will supply full information to intending purchasers.

17th March, 1877.

J. H. M. BARRINSFATHER, Solicitor, Hamilton.

The March, 1877.

J. H. M. BAIRNSFATHER, Solicitor, Hamilton.

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The property consists of about 120 acres, and is held under lease, having nearly 80 years to run at a nominal rent, and very moderate optional lodship. It is intersected by a public railway, giving communication to all parts of the country, and there are extensive openings on the ground.

The buildings, machinery, plant, inclines, &c., are all in good working order, and nearly \$10,000 worth of slates have been made during the last 78 months. These find a very ready market, and by a further judicious expenditure of capital the output might be largely increased. Several of the present proprietors may contribute towards further development, and should a purchaser desire it, payments may be spread over a term of years. There is also an increasingly valuable wayleave included with the property.

Further particulars may be obtained from John Menzies, Carnarvon; or from R. Easton Altker, 68, 8t. Vincent street, Glasgow, by the latter of whom Tenders for the Lease and Buildings will be received up to 16th May next.

A purchaser may have the Plant at a valuation. The highest or any Tender may not be accepted.

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PLANT, only having been used eighteen months in the erection of these works, consisting of TWO of SCHOLEFIELD'S PATENT SEMI-DRY BRICK PRESSES, complete, with gearing and 9 feet pan and rollers; also a PAIR of 5 feet RIBB ROLLERS, all in first-rate working order; with or without a first-class 25-horse power ROBEY MINING ENGINE, new eighteen months ago, and in first class condition. Apply to the Applier Inn Company (Limited), Doncaster.

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TO BE SOLD, BY PRIVATE BARGAIN, the LANDS and ESTATE of BROTHERTON, in the parish of West Calder, about 15 miles from Edinburgh, and 10 minutes walk from New Park Station.
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The public burdens are small.
The lands are in the midst of the mineral oil district, and contain shale, limestone, and other minerals believed to be of great value. There is also freestone, which might easily be worked.

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gear, also gear to wind and pump.

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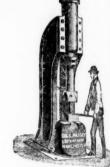






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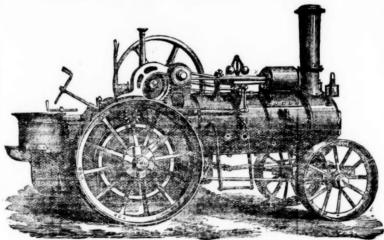
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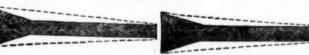
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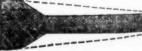
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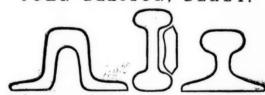
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PRINCE DIFFERENCE AND ADDRESS OF THE PRINCE	
Stares, Mines, Puid, Last wk. Cos. pr. Total divs. Per sh. 1	
15.00 Alderley Edge, c, Cheshire 10 0 0 12 11 8 0 5 0J	an. 1876
15000 Balmynheer, f, Wendron (according) 1 0 0	ov. 1875 une 1878
200 Broalack, f, c, St. Just 119 5 0 30 25 30 619 15 0 5 0 0 4000 Brookwood, c, Ruckfastleigh 1 18 0 25 24 234 234 8 16 0 0 2 0 N 2000 Bryn Alyn, f, Denbigh, (10l. sh.) 8 0 0 814 8 814 0 7 0 0 7 0 7 0 6 6 0 414 4444 4445 4 6 3 0 12 6 6	ug. 1872
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1024 Herodsfoot, 4, near Liskeard†	er 1879
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25000 Killaloe, st, Tipperary	
20000 Leadnills,* /, Lanarkshire	ar. 1877
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9000 Minera Mining Co., I, Wrexham* 5 0 0 15 10 12 67 0 2 0 4 0 M 20000 Mining Co. of Ireland, ci, c, 1* 7 0 0 5½ 534 5½ 23 11 6 0 3 6 Ja	ay 1877
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12000 West Wye Yalley, * (, Montgomery 3 0 0 3 2½ 3 0 6 0 0 3 0 No 512 Wheal Basset, c, Illogant 5 19 2 6 6 4 6 638 10 0 1 10 0 Au. 1024 Wheal Eliza Cousols c, St. Austell 20 0 0 100 0 0 100 0 1	v. 1876
1024 Wheal Eliza Consols f, St. Austell 20 0 0 10 0 0 4 0 0 Fe 2048 Wheal Jane, f, Kea 21810 134 14 14 8 5 0 0 5 0 Jul	D. 1877
4295 Wheal Kitty, t, St. Agues 8 4 6 214 2 246 11 19 8 0 9 2 7	
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10000 Wye Valley, I, Montgomery * 8 0 0 41/2 8 4 0 10 6 0 4 6 Oc	t. 1872
FOREIGN DIVIDEND MINES	
85500 Alamillos, I, Spain*†	r. 1877
	y 1876
15000 Bird'eye Creek, g, California* 4 00 7½ 34 7½ 0 10 0 0 10 0 No 12820 Burra Burra, c, So. Australia 5 00 7½ 34 7½ 0 14 0 0 2 6Jur	v. 1872
12820 Burra Burra, * c, Bo. Australia 5 0 0 0 14 0 0 2 5Jur 2000 Cape Copper Mining, *† So. Africa 7 0 0 42 39 41 27 15 0 1 0 0Ma	. 1872
15000 Chicago e Utah	r. 1877
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70000 English and Australian, ct S. Aust. 2 10 0 14 14 2 18 9 0 0 Dec	1872 1
80600 Flagstaff, s, Utah* 10 0 0 3½ 22½ 4 20 0 8 0July 25000 Fortuna, l, Bpain*t 2 0 065 8 6 6 9 2 0 6 8Mai 55000 Frontino & Bolivia, g, New Gran.*† 2 0 014 1½ 1½ 1½ 0 1 0 0 0 8 0Mai	
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1 00000 Port Phillip, q, Clunes*t	
10000 Barta Barbara 4 - Barbar	
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15000 Western Andes, s,* New Granada 5 0 0 0 11 101/2 0 0 10 Aug	1876
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NON-DIVIDEND FOREIGN MINES.	
20000 Angilo-Australian, g, Victoria*	Catt. 10
	y pd. 8
10000 Australian Central, g* (also 6000 deferred shares)	pd.
SECON Casana Sulphur Company Barrier Bond Bull Bull Bull Bull Bull	pd. 8
50152 Chontales, q. s. Nicaraqua*;	Pd. 14

NON-DIVIDEND FOREIG	N	MIN	ES		
Shares. Mines.	r)	40.00			
20000 Anglo-Australian, g, Victoria*		10.0		ast Pr. Cios. Pr	. Last Call.
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			***		Fully pd.
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		0 0		31/4 3 31/4	
50152 Chontales, g, s, Nicaragua*1	10	0 0	***	- "	
18000 Condes of Chili, s-l	2	0 0	***	34 34 34	
35000 Excelsior Hydraulic Gold Washing Co., California*	5	0 0		514 41/4 51/4	Fully pd.
100000 Exchequer c . California	6	0 0		- 14 074	Fully pd.
100000 Exchequer, g, s, California*;	1	0 0	***	21/3 13/4 3	Dec. 1871
40000 Holcombe Valley, g,* California.	1	0 0	***		Fully pd.
6000 Hornachos, s.i., (£10 shares) Spain	10	0 0		133/ 191/ 101/	July 1873
20000 Imperial Brazilian Collieries, Brazil	5	0 0	***	13% . 13% 13%	
		0 0	***	1 " "/ 114	Fully pd.
50000 Javali, g, Nicaragua*	2	0 0	***	16 36 14	Fully pd.
2500 La Manche, I, Newfoundland	10	0 0		10 /0	Fully pd.
12000 Lanestosa,* 1, z, Viscaya, Spain (£2 shares)	1 1	15 0	***		Fully pd.
75000 Malabar, g, Colombia* (67165 issued)	1	0 0	***	7/ "	Mar. 1876
40000 Malpaso, g, Colombia* (7400 pref. shares, fully paid)	1	0 0	***	78 5/3 7/4	Fully pd.
12000 Menzenberg, c, Honnef, Germany*		5 0	***	34 3/8 3/4	Fully pd.
4588 New Bensberg, i, l, Germany	8	0 0	***	***	Fully pd.
66000 New Quebrada, c, Venezuela*	A	0 0	***	par	Nov. 1876
20000 New Zealand Kapanga, g, Coromandel*	8	0 0	***	43/3 41/6 43/6	Fully pd.
3000 Oregon, g, Oregon, U.S. (preference shares)	4	0 0	***	21/2 21/4 23/4	Fully pd.
80000 Panulcillo, c, Chili*†(£80000 debentures)	Ä	0 0		44 4 41/4	Bept. 1875
80000 Pestarena United, g, Italy*;		0 0	***	1% 1% 1%	Fully pd.
50000 Providencia and New Rosario, s, Mexico*	1	0 0	***	14 1/4 1/4	Fully pd.
50000 Rica, g, Colombia* (40000 issued)	î	0 0			Fully pd.
22,181,000 Rio Tinto, c, Huelva, Spain	Gt.	ole	***	1/4 1/6 3/4	Fully pd.
100000 Rossa Grande, g, Brazil*; (£1 shares)	0.1	0.0	***	651/2 621/4 631/4	Fully pd.
25000 Russia Copper, Orenburg and Ufa*†	10	0 0	***	18 1/8	July 1872
25000 San Pedro, c, Chili*	9	0 0	***	214 13/4 23/4	Fully pd.
10000 Silver Plume, s, Colorado*	1	0 0	***	7/8 7/8 7/8	Fully pd.
87500 Snowdrift, s, Colorado*	0	0 0	***		Fully pd.
20000 Tecoma, s, Utah*	10	0 0	***		Fully pd.
20000 Intraditi Reel, 9, Australia	1	0 0		1/2 3/3 1/2	Fully pd.
20000 Thorshill Reef, g, Australia* 48174 United Mexican, s, Mexico*†1 4000 Utah, g, s-t, Utah*	28 1	5 0	***		Fully pd.
14000 Utah, g, s-l, Utah* 75000 Yorke Peninsula, c, South Angralia	5	0 0	0.0		May 1875
75000 Yorke Peninsula, c, South Australia	1	0 0	***		Fully pd.
			***	3/8 3/8 3/8	Fully pd.
9 Have made calls since last divide	and .	0 0	***	1 3/4 1	Fully pd.
	ara (E	was	Diag		

FOREIGN AND MISCELLANEOUS STOCKS, BOND

Argentine, 1868, 6 per cent. Bolivia, 6 per cent. Bolivia, 6 per cent. Chillan, 1888, 7 per cent. Chillan, 1888, 7 per cent. City of Providence, 5 p.c. coupon bonds Egyptian, 1862, 7 per cent. Do., 1967, 197 cont. Do., 7 per cent., V.M.L. Do., 9 per cent, guar Do., 1 per cent, guar Do., 1 per cent, guar	64 66 19 21 92 94 101 104 98 100 49 50 50 51 5 60 63	Foreign and Col. Gov. Trust, 6 p. cent. Do., 5 per cent., 2d issue Do., 6 per cent., 3d issue Do., 1872, 4th issue Do., 1873, 4th issue Percuvian, 1870, 6 per cent. Do. 1872, 5 per cent. Russian, 5% per cent. L. Mort.	53 57 64 69 53 58 54 59 16½ 17½ 1; 14
Do., / per cent., K.M.L.	85 36	United States Mort., 6 per centers	

_		NON-DIVIDEND MINES.	
		Shares. Mines. Paid Last wk Class	pr
pd 18	76	40000 Aberdaunant, i, Lianidloes*	6
18	75 73 72		
18	75	28000 Belstone. * c, Devon (27,000 fy. pd.) 1 0 0 24 24 24	
18	76	30000 Bodidris, * l, bl, Denbighshire 1 00 114 1 114	
18	72	2000 Bowden Hill,* snn. 1 0 0 1/6 7/6 11/6	
18 18 18	72	Sound Caldbeck Fells, t, Cumberland* 2 0 0 1590 Cathedral, t, c, Gwennap* 1 10 0 1½ 1 1½ 1 1½ 1 10 00 10 000 Central Foxdale, t, I. of Man*(2l, sh.) 1 v 0	
18 18	76	10300 Central Van.* 1, bt. Llanidloes 5 0 0. — 128 Clementina, t. Llanrwst 20 0 0. 40 50 40 5000 Combellack,* t, Wendron 2 0 0. 24	
18	76	24 00 Court Grange, s-l., Cardiganshire 0 15 0 1/2 1 1/2	
18	4		
18:	6	12000 Derwent,* /, Durham	
187 187	7	60(0 East Chiverton, I. Perranzabuloe 6 14 6 21/2 2 21/2	
187 187 187	7	18300 East Van, 4, Llanidloes 5 0 0 734 6 6 4 20000 Elgar, 3-1, Cardiganshire 1 0 0 112 1 114	
187 187	6	5000 Frank Mills, l, Christow	
187	7 8	8950 Gawton, c, Tavistock 4 3 6. 56 36 5 36 56 36 56 36 56 36 56 36 36 10 0. 0. 0. 10 0. 0. 12 11	1
187 187 187	6	10000 Glyn, '', Lindidoes 2 0 0 1½ .1½ 1½ 1½ 12 1200 Goginan, & Level Newydd, Card., i 2 10 0 2 1½ 2 10000 Gold, a Merjonethyfor	
187 187 187	4	12000 Goginan, & Level Newydd, Card., # 2 10 0 2 13/4 2 12000 Goginan, & Level Newydd, Card., # 2 10 0 100000 Gold, g, Merionethshire 1 0 0 10 0 14 1/4 13/4 13/4 13/4 13/4 13/4 13/4 13	
187 187 187	7 6	9500 Great Pant-y-Pydew, l, Holywell 2 0 0	
187	8	10000 Harebone (111 # 4 Day) 0 15 0	
187 187 187	7 7	8400 Harwood, * /, Durham (£1 sh.), 0 50 1 7/4 1 5000 Hush Eisteddfod Minera, * / 2 0 200 Islay, * /, Scotland 28 0	
187 187 187	5	5000 Killifreth, t, Chacewater	
187 187	7	12000 Ladywell, * I, Salop 2 10 0 114 1 114	
87	3	2500 Levant, c, t, St. Just	
878	4	5000 Med vn Moor t Wondson	
87: 87:		11000 Monydd Gorddu, l, Cardigan*(Red.) 5 0 0 51 5 51	
87:	5	23000 Nant-y-Ronen, s-l, Cardigan* 1 0 0 1 0 0	
872	3 3	20000 New Consols, s,a, Stoke Climsland 3 0 0 11/	
877		20000 New East Foxdale, s-l, Isle of Man. 0 15 0 134 114 14000 New Fowey Consols, t, St. Blazey*, 3 0 0 2	
876 876 872	3	1492 New Hendra, t, Breage 219 0. 14. 14 11/6 5000 New St. Agnes, t, St. Agnes 5 0 0. 54. 6 55/ 3200 New South Merllyn, I, Flint 210 0. 2 11/4 2	
874 872 877	1	10	
878 876 875			
876 872 876		6000 Old Talargoch, l, Flintshire* 2 0 0 — 2500 Old Tincroft, c, l, Lelant* 4 0 0 4 3 4 6400 Oola Hills, * s-l, Limerick 5 0 0 —	
872 876 878	i	2000 Pandora, * l, Carnarvon	
877 876 872	1 3	2010 Permadea Consols, t, Redruth 5 0 0 7 63/ 7	
973 978 977	1		
975 973	1	75000 Fryninmon, f. Llanidioss* 2 0 0 36 36 36 36 36 36 36 36 36 36 36 36 36	
972 973 973	1	0000 Red Rock,* /, Cardigan 2 0 0 2111/ 21/	
976 972 976	1	3000 Russell, s-l, Swymbridge 0 6 0	
376 376 376	1	5000 Silvercross,* c, t, Marazion	
76 173 176	1	000 80. Cwnystwith, I, Cardiganshire. 2 0 0 3 2½ 3½ 3000 80nth Darren, I, Cardiganshire. 110 0 3 2½ 3½ 512 80nth Dolcoath, c, I, Redruth 12 5 0 1½ 1½	116
74 76	11	3000 South Roman Gravela, i*	
77	4	36 10 10. 14 12 14	
d.	10	3000 St. Lawrence, Amal., I, Flintshire* 2 0 0	8
d. d.	16	000 Success, &c., t, Derb. (12,000). called) 1 0 0 2/4 2 2/4 000 Sunnyside, * t, Durham 2 0 0 2/4 2 2/4	
d. d.	14	000 Talybont, * s.4, Talybont 1 0 0 2½ 2½4 400 Tescalate, * t, Durham 1 0 0 1 ½ 1 000 Teign Valley, t, bar, Bridford 1 0 000 Temple, Cardigan 1 0 0 2½ 2½ 000 Trebeigh Comols, s.4, 8t. Ive 0 7 6 ½ 3½ 000 Trebeigh Comols, s.4, 8t. Ive 0 7 6 ½ 3½	\$ 10
d. d. 71			Stk
d. 73	12	1000 Trethellan, s-i, Crantock 200 200	
1. 1.	-	and thood, c, c, henwyn 4 5 8	Bt Bt
1.	120	000 Van Consols, l, Lianidioes*	
1.	2C0	80 West Bryn Celyn, * l, Flintshire 1 0 0 500 West Combmartin, s-l, North Devon	
1.	70 30 50	00 W. Craven Moor, I, Pateley Bridge*, 10 0 0 1314 12 13	
5	100	100 West Llanguage, Neuge 2 0 0 214 . 21/2 21/4	1
1.	120	00 West Mary Ann, /, Menheniot 0 3 6 14 94	Stl Stl
2	100	0) West Pateley Bridge, l, Yorkshire 1 0 0 11/1 1 11/2 00 West Roskear, l, s-l, bl, c, Camborne. 0 12 0 3 21/2 3	Sth
	150	00 West Wheal Psevor, t, Redruth 0 10 0 1% 1% 1%	8tk
5	60	00 Wheal Argus, t, Sancreed 0 10 0 314314 314	Btl
	60	41 Wheal Basect and Grylls, t 9 18 6. 2 10 00 Wheal Crebor, c, Tavistock 2 0 0 0 2 1½ 2 00 Wheal Crebor, c, Tavistock 4 1 0 3½ 2½ 3 00 Wheal Emma, t, c, Ruckfatti.	1 8
	51	50 Wheal Fowey and East Eliza, t 100 0 0 110 100 110 79 Wheal Grenville, c, Camborne* 2 8 8 137 147 147	Stk Stk
	90	(in Wheel Bearing & D.)	Stk 1
	40	80 White Cliff, * l, Llanrwst 13 6 6 2 1% 1%	1
1			Btk

5, blende el, coal; e, copper; g, gold; l, lead; s, silver; sl, slate; s-l, silver-lead; t, tin; z, zinc.

* Limited Liability Companies; † quoted on the Stock Exchange; Į have paid dividends.

IRON AND COAL COMPANI

SA	res. Company.	MP	ANI	RR	
210	Company.	Pu	rid.	-113,	
	15 Albion Steel and Wire Co. [L.]	£75	0 0		Print
	0 Abbot, John, and Co. [L.]	14			6 2
	00 Ashbury Co. [L.]	90			ar les
	10 Bagnall, John, and Sons [L.] 10 Benhar Coal Co. [L.] 10 Bilbao Iron Ore Co. [L.]	10	0 0	40	
-	60 Bilbao Iron Ore Co. [L.]	10	0 0	61	
	10 Bilson & Crump Meadow Coll. Co.[L. 4 Blaen Cwmbach Coal Co. [L.] 20 Blaenavon Iron and Steel Co. [L.] 20 Bolckow, Vaughan, and Co. [L.]. A 21 Bowling Iron Co. [L.]	710	0 0	23	die
,	4 Blaen Cwmbach Coal Co. [L.]	14			5 343
10	Blacker Vanghan and Co. [L.]	80	0 0		-
- 1	Bowling Iron Co. [L.]A	45	U ()		
			0 0	. 1	
	Brown, Bailey, and Dixon [1.1	40	0 0		-
10		70		23	20
10		5		Da	ir i
	Cammell and Co. [L.] Cannock and Huntington Coal [L.] Cardiff & Swansea St. Coal Co. [L.] Cardigan Steel and Wire Co. [L.] Central Swedish Lyon and Steel L.	80			-
1	0 Cardiff & Swansea St. Coal Co. (L.)	6	0 0		35
	6 Cardigan Steel and Wire Co. [L.]	8			2)
	O Central Swedish Iron and Steel [L.].	10	0.0	**	-
		5	0 0		1
8	Chariton Iron Co. [L.]	50			6 3
1	0 Chillington Iron Co. [L.]	45			14
	1 Clee Hill Colliery Co. [L.]	10	0 0	63	, 2
1	Consett Iron Co. [L.]	1 7			- 47
	1 Consett Spanish Ore [L.]	i			6 11
6	Cooke, William, and Co. [L.]	40	0 0	" 16	die
8	Darlington Iron Co. [L.]	10	U B	. 0.	. 85
	0 Chatterley Iron Co. [L.] 0 Chillington Iron Co. [L.] 1 Clee Hill Colliery Co. [L.] 1 Clee Hill Colliery Co. [L.] 1 Consett Fron Co. [L.] 1 Consett Spanish Ore [L.] 2 Cocke, William, and Co. [L.] 2 Darlington Iron Co. [L.] 3 Dary Brothers [L.] 5 Diamond Fuel Co. [L.] 2 Ebbw Vale Co. [L.]	00			6 89
3		5			19
10	Fox, Samuel, and Co. [L.]	29 80			19
10	General Mining Ass. [L.] (£1 returned	1) 9	0 0.	9.0	37
2	Great Western Coal Co. [L.]	17			3
1	Gwyngwillim Colliery Co. [L.] Hopkins, Gilkes, and Co. [L.] Knowles, Andrew, and Sons [L.]	3	0 0.		
66	Knowles, Andrew, and Sons [L.]		0 0.	71	, -
16	Llav Hall Coal, Iron, & Firebrick L.	10	0 0.	. 1	1 13
	Littledean Woodside Coll. Co. [L.]		0 0.	10"	101
80	Llynvi, Ogmore, & Tondu Co. [L.]		0 0.		-
10	Lydney and Wigpool Iron Ore [L.]	8	5 0	10	23
10	Marson Steel and Iron Co. (T.)				, 9
10	Midland Iron Co. [L.]	8			64
i	Mold Argoed Colliery Co. [L.]		0 0.	1/	11
10	Monkland Iron and Coal Co. [L.]		U 0		1
		3 1	0 0.	100	1
100	Nant-y-Glo and Blaina (8 p.c. pref)	100	U D.	91	
20	New Shariston Collieries [L.] Prof	U	8 0.	. 14	dia
10	Newport Abercarn Coal Co. [L.]	20	U O.	TOTA	165
10	Northmptn. Coal, Iron & Wagon [L.]	10	0 0	. B1/	6
10	Northfield Iron Co. [L.]	8	0 0.,		-
1	Norton Green Coal Co. [L.]	1	0 0		2
85	Palmer's Shipbuilding and Iron [L.]	20	0 0	18	101
100	Patent Nut and Rolt Co. [L.]	65			15% lis.
20	Patent Shaft and Axletree [L.]	14	0 0	. 7	710
20	Pelsall Coal and Iron J. J.	AU I	U O.,	. 250.0	10
50	Phoenix Bessemer Co. L.	60	0 0.		10
80	Midiand fron Co. [L.] 5 0		0 0	. 21	63
10	Richards and Co. [L.]	10	0 0	. 7	23
100	Sandwell Park Coiliery Co. [L.] 1 Ditto New	100	0 0		-
100	Shotts Iron Co. [L.]	10 (0 0	2014	21
100	Sheepbridge Iron and Coal [L.]	55	0 0	par sic	1
50	Silkstone & Dodworth Cl. & Iron L.	27	0 0	. 12	514
20	Skerne Ironworks [L.]	20 (0 0	1312	19
50	Somorrostro Iron Co. [L.]	60 (11
20 100	Staveley Iron and Coal Co. [L.]	17 (0 0		~
100	Ditto ditto New	9 0 (0 0	27	29
20	Bouth Cleveland tronworks L	20 (0		5
10	Swansea Valley Steam Coll. Co. [L.].	6 (0 0		-
100	Thames Iron Company 1	00 (0 0		-
50	Tredegar from and Coal Co. [L.]	12 (0 0	. 8	3
25 20	Ditto B. shares	25 (12 (U U	. 2	1
1	United Bituminous Collieries [L.]	1 0	0 0	. 1%	11/
10	Vancouver Coal [L.]	B (0 0	have	-,
100	Vickers, Sons, & Co. [L.] 10	0 0	0	35	45
50	Weish Ironworks Co. [L.]	80 (0 0		-
25	W. Cumberland I. and Steel [L.]	20 (0 0	. 10	9
10	West Mostyn Coal [L.] (12 p.c.pref.)	D (0.0		-
10	Whitehaven Iron Co. [L.]	D (0		-
00	Wigan and Whiston Coal Co. [L.]	LU U	0 0		-
00		75 0	0 0		-
					-
	WAGON COMPAN	T TR.C1			
	WAGON COMPAN				
10	Birmingham Wagon Co. [L.] 1	10 0	0	211/	221/
10	Ditto, 2nd issue Ditto, pref., 6 per cent. British Wagon Co. [L.]	4 (0 0	. 8	221/4 51/4
20	British Wagon Co. (L.)		0 0	256	12%

10	Birmingham Wagon Co. [L.]	10	0 0	2114	2					
10	Ditto, 2nd issue				1					
10	Ditto, pref., 6 per cent	10	0 0	1214	1					
20	British Wagon Co. [L.]	10	0 0	256	-					
10	Gloucester [L.]	10	0 0	12%	1					
10	Ditto, 5th issue	5	0 0	134	^					
10	Met. Rail. Car. and Wagon Co. [L.]	5	0 0	876						
5	Ditto, pref., 6 per cent.	5	0 0	534						
50	Midland	50	0 0	93	9					
20	North Central Wagon Co		0 0							
5	Rail. Car. [L.] (Oldbury)	5	0 0 1	1036						
5	Ditto, pref., 6 per cent	5	0 0		-					
20	Sheffield Wagon Co. [L.]	15	0 0	314	1					
10	Yorkshire Wagon Co. [L.]	10	0 0	41/6	i					

8tk. Submarine 100 0 0225 22 10 West India and Panama 10 0 0 3 20 Western and Brazilian 20 0 0 5		TELEGRAPH COMI	PAN	11	es.	
10 Brazilian Submarine	8t.	'Anglo-American	100	0	0 574	1 87M
20 Direct United States Cab's 20 0 0 114 1	10	Brazilian Submarine	10	0	0 634	656
10 Eastern 10 0 0 1%	20	Direct United States Cab's	20	0	0 114	114
10 East. Exten., Australia and China. 10 0	10	Eastern				
25 Indo-European 25 0 0 19 1	10	East. Exten., Australia and China	10			7%
25 Indo-European 25 0 0 19 1	10	Great Northern				8
10 Mediterranean Extension 10 0 0 2% 8 Reuters 8 0 12 1 8tk. Submarine 100 0 0 225 2 10 West India and Panama 10 0 0 3 20 Western and Brazilian 20 0 0 5	25	Indo-European	25			20
8 Reuters 6 0 012 1 8tk. Submarine 100 0 0225 23 10 West India and Panama 10 0 0 8 20 Western and Brazilian 20 0 0 5	10	Mediterranean Extension	10	0	0 254	3
8tk. Submarine 100 0 0225 23 10 West India and Panama 10 0 0 3 20 Western and Brazilian 20 0 0 5	8	Reuters	8			13
10 West India and Panama	Stk.	Submarine		0	0225	235
20 Western and Brazilian 20 0 0 5	10	West India and Panama	10	0	0 8	31/
1000 Western Union, 7 per cent. Mort. Bonds \$1000 109 11	20	Western and Brazilian		0	0 5	51/
	1000	Western Union, 7 per cent. Mort. Bone	ds \$1	00	0109	111

	Toos Western Curon, I per cent. mort. Do	ude .		rv	1200	***
	MISCELLANE	DUS	3.			
	Stk. Atlantic and Great Western Leased					
	Lines, Rental Trust	10	0 0	0	35	40
	25 Austral. Mort. Land and Finance [L.	1		0		45
	25 Australian Agricultural	2		0		95
	10 Avonside Engine [L.]	7		0		2
	Stk. Baltimore and Ohio, 6 per cent	100			108%	100%
	Stk. Cent. of New Jersey Con. Mort			0		83
	8tk. Cent. Pacific of Calif., 1st Mort. 6 p.c	100	0		103%	1045
	25 City of London Real Property [L.]	12	0	0		1%
	25 Copper Miners of Eng. (7 p. c. p. ef.			0		-
	5 Credit Foncier of England [L.]	-		0		15
	5 Diamond Rock Boring	4			1%	1
	15 English and Foreign Credit	8		0		-
	16 Fore Street Warehouse [L.]	14		0		15
	15 Foster, Porter, and Co. [L.]	10		0		13
	8 Gen. Phos. & Chem. Works Co. [L.]			0		-
	1 Glaisdale Whinstone Quarry	1		0		-
	1 Greenhill [L.]	î		0		11/6
	17 Hudson's Bay Company	17	0	0	131/2	14
	10 Huntington Copper and Sul. Co	9	0	0	814	114
	Stk. Illinois Central, \$100 shares	100	0	0	45	47
	8tk. Illinois & St. Louis Bridge, 1st Mort.			0		95
ì	Stk. Ditto, 2nd Mort., 7 per cent.	100		0		63
1	Stk. Illinois Cent. Sinking Fund, 5 p. cent.	100	0	0	87	89
	Stk. Ditto, 6 per cent	100	0	0	97	99
ı	7½ Imperial Credit [L.]	7	10	0	736	7%
ı	- Ditto, Surplus Certificate	•	40	0	51/2	6
1	Stk. Lehigh Val. Con. Mort., A, 6. p. cent.	100	0	0		99
1		10		0	9%	9%
Į	25 National Discount [L.]	5		0		10%
1	8tk. N. Cent. Rail. Con. Mort., 6 per cent.	10		0		85
1	5 Patent Gunpowder Company	5	0	0	43%	41/4
١	10 Pawson and Co. [L.]	6	0	0	160	is. K
1	50 Peninsular and Oriental Steam	50	0	0	38	60
1		100	0	0	59%	100%
1	Stk. Pennsyl. Gen. Mort. 6 p. cent., 1910. Stk. Ditto, Con. Sink. Fund, 6 p. ct., 1905		0	0	89%	901/4
1	Stk. Bottish Aust. Investment Company.	100	0	0	185	190
1	Stk. Ditto, 6 per cent. Preference	100	0	01	121	198
1	10 Silber Light (ord. sh.)	10		0		-
1	20 Suce Canal shares	20	0	0		-
1	20 Suez Canal shares		0	0	2834	27%
1	12 Telegraph Construc. & Mainte. [L.]	12	0	0	2%	3%
1	5 Ditto, Second Bonus Three per Cents	5	0	0	22	34
1	10 Tharsis Sulphur and Copper Co	100	0	0	97	99
1	Stk. Union Pacific Land Grant, 1st Mort.		0	0 1	101%	102%
1	8tk. Union Pacific Railway, 1st Mort	100	0	Urest	1/8	-

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